# PETROLEUM WEEK

OCTOBER 7, 1955

■ A McGRAW-HILL PUBLICATION

Whiting Fire Seared Whole Industry ..... 9

Army Plans to Reduce Types of Fuel ..... 12

Drilling with Steel 'Bullets' ..... 14

Coming: Automatic Crude Transfer ..... 15

Managing Makes Managers ..... 18

How to Run an Undersea Pipeline ..... 22

The Stock Slide: Its Impact on Oil ..... 24

Does One Well Comprise a Field? ..... 26

ODM Refinery Goal Won't Help Much ..... 30

Gasoline Prices Are Always Wrong! ..... 32

worth watching

Price 35 Cents

# Nalco

## DOWNHOLE TREATMENTS CAN STOP THIS

Pulling tubing for replacement and repairs due to corrosion damage can be stopped with Nalco Downhole Treatments.

## BY *Effective* CORROSION CONTROL

Once Nalco Downhole Treatments get to work in your producing wells, you will see a big, satisfying chunk cut out of maintenance costs created by downhole corrosion damage. Initial dosages (of either the stick or liquid type) put a tough microscopic film on all metal surfaces in contact with gas and fluid ... literally seal them off from corrosive action. Small subsequent dosages keep the film intact; substantially prolong equipment life.

We can show you plenty of case histories on plummeting maintenance costs with Nalco Corrosion Control ... Or better, *prove* Nalco effectiveness in some of your troublesome wells — even if they are already being treated. Call your Nalco Representative, or contact us direct for prompt action.

**NATIONAL ALUMINATE CORPORATION**
**6300 West 66th Place • Chicago 38, Illinois**
*In Canada: Alchem Limited, Burlington, Ontario*

*Nalco*®
**PRODUCTS • Serving the Petroleum Industry through Practical Applied Science**

# SHELL REPORTS

## A PICTURE ROUND-UP OF SOME ACTIVITIES THAT MADE NEWS OUTSIDE THE PETROLEUM WORLD

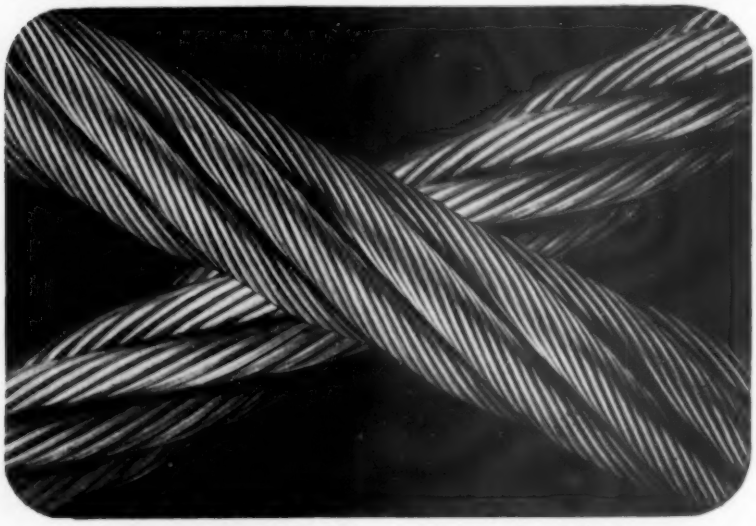
**CRYSTAL BALL.** To "zero in" on off-shore drill sites with pin-point precision, Shell engineers came up with this spinning, mirrored marker. The "crystal ball" rotates atop a buoy in an off-shore exploration area. Ashore, surveyors on two eighty-foot towers spot the marker by its dancing reflections and "fix" the new drill site. Shell's efficient handling of such everyday problems means faster development of off-shore oil exploration — a vast new reserve for America to count on.

**SAFETY IN NUMBERS.** Safety at Shell is a full-time job. In this demonstration a .22-caliber bullet is fired into the safety lens of protective goggles. Even with a direct hit, the safety lens will not shatter! Recently, safety-conscious Shell people at the Wilmington-Dominguez Refinery, Calif., amassed a record of almost 4,000,000 man-hours without a lost-time accident. Records like this mean safer working conditions and lower cost, better quality products for everybody.

**BUILD A HILL.** A boy forever needs a hill to climb — and this designer in Oakland, Calif., is making one. Using a fabric impregnated with Shell's new EPON® resin, a strong, safe "mountain" is formed for active youngsters to climb up and over. This is only one of the many uses found — and yet to be found — for versatile Shell EPON resin. The potential of EPON resin is so great that each week Shell researchers are developing more and more useful and necessary products from it. Shell people work for new methods, new products, and new ideas for easier living.

SHELL

**FIRST WE DEVELOPED 1105 ROPE WIRE.**



**THEN WE MADE ROEBLING'S**

# *Royal Blue*

**WIRE 1105 ROPE**

**1105** takes Royal Blue out of the ordinary wire rope class.

**1105** is a rope wire that's new—that's stronger. It's the biggest news in many years.

**1105** is the result of more than a century of research and development—it's the wire that gives Roebling Royal Blue the stamina that pays off in service.

*Contact your Roebling distributor or write us for the full story.*

# ROEBLING

*Subsidiary of The Colorado Fuel and Iron Corporation*

CF&I

JOHN A. ROEBLING'S SONS CORPORATION, TRENTON 2, N. J. BRANCHES: ATLANTA, 934 AVON AVE. • BOSTON, 51 SLEEPER ST. • CHICAGO, 5535 W. ROOSEVELT RD. • CINCINNATI, 3253 FREDONIA AVE. • CLEVELAND, 13225 LAKEWOOD HEIGHTS BLVD. • DENVER, 4801 JACKSON ST. • DETROIT, 915 FISHER BLDG. • HOUSTON, 6216 NAVIGATION BLVD. • LOS ANGELES, 5340 E. HARBOR ST. • NEW YORK, 19 RECTOR ST. • ODESSA, TEXAS, 1930 E. 2ND ST. • PHILADELPHIA, 230 VINE ST. • SAN FRANCISCO, 1740 17TH ST. • SEATTLE, 900 1ST AVE. S. • TULSA, 321 N. CHEYENNE ST. • EXPORT SALES OFFICE, 19 RECTOR ST., NEW YORK 6, N. Y.

# PETROLEUM WEEK


**Publisher**—Harry L. Waddell

**Editor**—Herbert A. Yocom

•

**Senior Editors**—Glenn Green, Jr. (Houston), W. M. Jablonski, J. P. Mosher, Jr., Robert E. Spann, John Barton, Al Reese

**News Editor**—James M. Sutherland; Clyde LaMotte, Assistant

**Assistant Managing Editor**—Richard M. Machol

**Assistant Editors**—Halsey Peckworth, Georgia Macris, Ade Ponikvar, Leo M. Murray, Arthur Matula; *Chicago*—Leonard Castle, Frank Holman; *Detroit*—Holger Ridder; *Houston*—Marvin Reid; *Los Angeles*—Richard Elwell; *Tulsa*—William P. Sterne

**Presentation Director**—William A. Caperell, Jr.

**Editorial Assistants**—Betty Deane Suiter (Chicago), Larry Christiansen, Jr., Eugene L. Bush (Houston)

•

**Washington News Bureau**—George Bryant, Manager; Glen Bayless; *Oil Specialists*—A. R. Patla, Roy Calvin, Ernest Conine, N. B. Musselman, Dean Reed; *Staff Writers*—A. E. Adams, Jay Flocken, Boyd France, William Gilmour, Sam Justice, D. O. Loomis, Gladys Montgomery, A. L. Moore, E. W. Olcott, Seth Payne, M. A. Reichek, Caroline Robertson, Vincent Smith

**Domestic News Bureaus**

*Atlanta*—W. H. Kearns, Frances Ridgway; *Cleveland*—Robert Cochran, William N. Troy; *Los Angeles*—John Shinn; *San Francisco*—Margaret Ralston; *Correspondents*—Albuquerque, Austin, Bakersfield, Bismarck, Cheyenne, Cincinnati, Corpus Christi, Dallas, Denver, Fargo, Great Falls, Honolulu, Jackson, Lake Charles, Memphis, Midland, Minneapolis, New Orleans, Oklahoma City, Philadelphia, Phoenix, Pittsburgh, Portland (Ore.), Sacramento, Salt Lake City, San Diego, Seattle, Shreveport, Spokane, Tulsa

**Foreign News Bureaus**

*Editor*—John Wilhelm; *London*—Edward W. S. Hull; *Paris*—John O. Coppock; *Bonn*—Gerald Schroder; *Rio de Janeiro*—Peter Weaver; *Mexico City*—John H. Kearney; *Tokyo*—Dan Kurzman; *Bombay*—Gordon Graham; *Correspondents*—Amsterdam, Beirut, Buenos Aires, Cairo, Caracas, Edmonton, Havana, Istanbul, Johannesburg, Karachi, Lima, Manila, Melbourne, Ottawa, Regina, Rome, Vancouver, Vienna, Winnipeg.

**Economics Staff**—Dexter M. Keezer, Director; Robert P. Ulin, Peter J. Davies

•

**Business Department**

*Advertising Sales Manager*—Ervin E. DeGraff; *Business Manager*—Richard H. Loyer; *Sales Promotion Manager*—Peter S. Carberry; *Advertising Service Manager*—John E. Thompson; *Assistant to the Publisher*—George Reid (Houston)

•

**Other McGraw-Hill Petroleum Publications**

NATIONAL PETROLEUM NEWS
PETROLEUM PROCESSING
PLATT'S OILGRAM NEWS SERVICE
PLATT'S OILGRAM PRICE SERVICE



**Vol. 1, No. 14—PETROLEUM WEEK—October 7, 1955**

Published weekly by McGraw-Hill Publishing Co., Inc., James H. McGraw, (1860-1948), Founder.

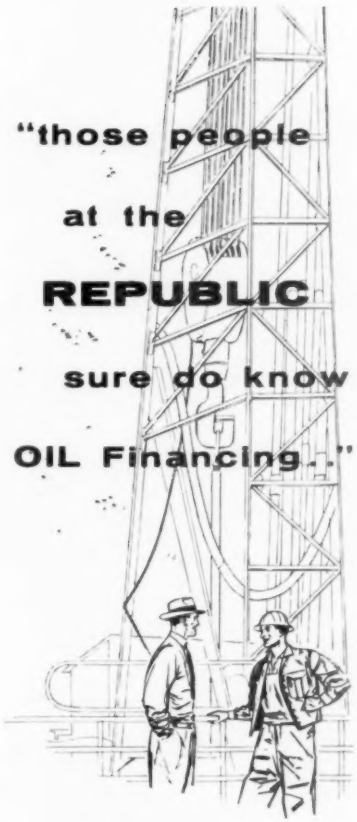
**Executive Editorial, and Advertising Offices:** McGraw-Hill Building, 330 W. 42nd St., New York 36, N. Y. Publication Office, 871 N. Franklin St., Chicago 10, Ill. Donald C. McGraw, President; Paul Montgomery, Executive Vice President; Joseph A. Gerardi, Vice President and Treasurer; John J. Cooke, Secretary; Nelson Bond, Executive Vice President, Publications Division; Ralph B. Smith, Vice President and Editorial Director; Joseph H. Allen, Vice President and Director of Advertising; J. E. Blackburn, Jr., Vice President and Circulation Director.

**Subscriptions:** Address correspondence to Petroleum Week, Subscription Service, 330 W. 42nd St., New York 36, N. Y. Current single copies, 35¢. Subscription rates, all countries: $3 for one year, $4 for two years, $5 for three years. Orders must indicate company, industry division, and position.

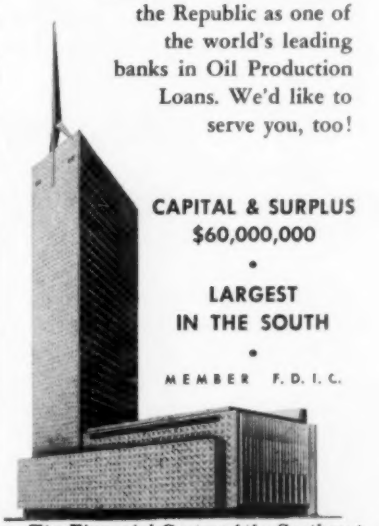
Second class mail privileges authorized at Chicago, Ill. Printed in U. S. A.


Copyright 1955 by McGraw-Hill Publishing Co., Inc. All rights reserved.






We're proud of comments like this — for they underscore this fact: From Texas to the Williston Basin, from South America to the Middle East to Canada ... Oil men know the Republic as one of the world's leading banks in Oil Production Loans. We'd like to serve you, too!



CAPITAL & SURPLUS
$60,000,000

•

LARGEST
IN THE SOUTH

•

MEMBER F. D. I. C.

*The Financial Center of the Southwest*

REPUBLIC
NATIONAL BANK of Dallas

# FIXAFRAC

## Temporary plug diverts DOWELL fracturing and acidizing treatments into new zones

When you want acidizing or fracturing to hit hardest at relatively tight sections of the open hole . . . use Fixafrac® to put it there!

Dowell engineers pump this solid-carrying gel into the well ahead of (or between stages of) Dowell fracturing or acidizing treatments. Temporarily sealing off initial fractures or areas of existing permeability, Fixafrac diverts treating fluids into new sections of the pay. Thus, Dowell engineers are able to concentrate the full force of acidizing or fracturing where it can bring you the most *added* production.

Treatment completed, Fixafrac quickly liquefies—without use of a gel-breaker—and returns to the bore, leaving the formation free. Dowell offers a selection of temporary plugging materials that control treatments over a wide temperature and time range. Fixafrac is but one of many auxiliary services developed by Dowell research.

For service, or for more information, call any of the 165 Dowell offices in the United States and Canada; in Venezuela, contact United Oilwell Service. Or write Dowell Incorporated, Tulsa 1, Oklahoma, Department J-75.

*services for the oil industry*

DOWELL

A SERVICE SUBSIDIARY OF THE DOW CHEMICAL COMPANY

# 60-Second Summary / WHAT'S HAPPENING IN OIL

AT-A-GLANCE — Copyright — PETROLEUM WEEK

October 7, 1955

## dept/INDEX


| | |
|---|---|
| Production | 14 |
| Refining | 30 |
| Transportation | 22 |
| Marketing | 32 |
| Washington | 6 |
| Key Prices | 34 |
| The Market Trend | 35 |
| Statistics | 36 |
| Editorial | 40 |
| International | 26 |
| Management | 18 |
| Oil Men at Work | 37 |


**Next push-button goal: Automatic transfer of crude from the wellhead to the pipeline.** A special API study group reports some progress is being made. . . . p. 15

•

**The Whiting, (Ind.) refinery fire is having far-reaching effects.** Southwest producers have altered their schedules; other refiners are busy filling the products gap; transportation has been speeded up; even Gulf and East Coast product markets are being affected. It demonstrates once again the interdependence of the industry. . . . p. 9

•

**The Army wants to reduce the variety of fuels it uses.** To do this, it is launching a long-range program aimed at having future equipment designed to use a certain type of fuel, instead of tailoring the fuel to the equipment. . . . p. 12

•

**Natural gas from Mexico will start flowing to U. S. markets** if a deal between Petroleos Mexicanos and Texas Eastern Transmission Corp. is approved by the Federal Power Commission. . . . p. 12

•

**The government has reopened the door for some fast tax writeoffs,** but refiners wishing to apply will have to hurry because the new expansion goal has almost been met already. Other oil goals, except for alkylates, have been closed or restricted. . . . p. 30

•

**How can good men be developed?** A top-flight management consultant offers these tips: Special training courses may help, but the best way to develop a manager is to let him manage. Don't wrap him in red tape or supervise him too much. Give him challenging responsibility and the authority with which to meet it. . . . p. 18

•

**There are problems a-plenty in building an offshore pipeline.** But the MCN Group has done it off the Louisiana Coast despite bad weather, big waves, and the sneaky attacks of rock-boring clams. . . . p. 22

•

**Australia is discovering that oil production has its pitfalls.** Since the first exciting strike in 1953, seven dry wells have been drilled nearby, causing speculation that this may be a "one-well field." Other problems—such as getting the crude to the market—are also having a sobering effect. . . . p. 26

•

**There's a growing uproar over gasoline pricing.** Some Congressman, government agency or industry group calls for an investigation any time prices go up or down—and some are suspicious if prices stay the same. It puts suppliers in a tough spot. . . . p. 32

# Looking Ahead in Washington

McGraw-Hill
Washington
Bureau

October 7, 1955

**Oil and gas tax problems are coming to a head.**

**Another attack on percentage depletion is in the works.** A joint economic subcommittee of Congress will make a tax study in December. Depletion opponents will use the hearings as a springboard for an attack next year. A change in the allowance is unlikely now, but the issue makes good politics. The Independent Petroleum Assn. of America is gathering facts and figures to show that oil and gas foot their share of the nation's tax bill. The Treasury Dept. is making its own study; there are no signs it has reached any conclusions—but the issue is explosive.

**There may be a change in the excise tax setup.** A House tax-writing subcommittee is studying proposed changes in the administration of excise taxes. Several members already are convinced oil jobbers shouldn't have to bear the burden of collecting the gasoline tax. A bill providing for tax refunds on gasoline destroyed by floods and fires got a boost from the recent hurricanes. The Internal Revenue Service's refusal to collect the tax on re-refined oil is in for a going over, too.

•

**Picking up steam is a drive to repeal the tax on petroleum shipments** and other transportation. Oil is participating in the National Conference for Repeal of Taxes on Transportation. Sentiment is growing in Congress for repeal. But the drive may stub its toe on a hard political fact: Other tax-cutting is more popular in an election year.

**Proposals for higher taxes on truckers will get a boost** from tests recently conducted by the Western Assn. of State Highway Officials. The experiments, in which various vehicles were run over a test road, are expected to show trucks do most of the damage. The findings will weigh heavily in a study being made by the Bureau of Public Roads to determine the amounts various highway users should pay for better roads. However, the bureau's final recommendations will reflect a top-level decision by the Eisenhower Administration.

•

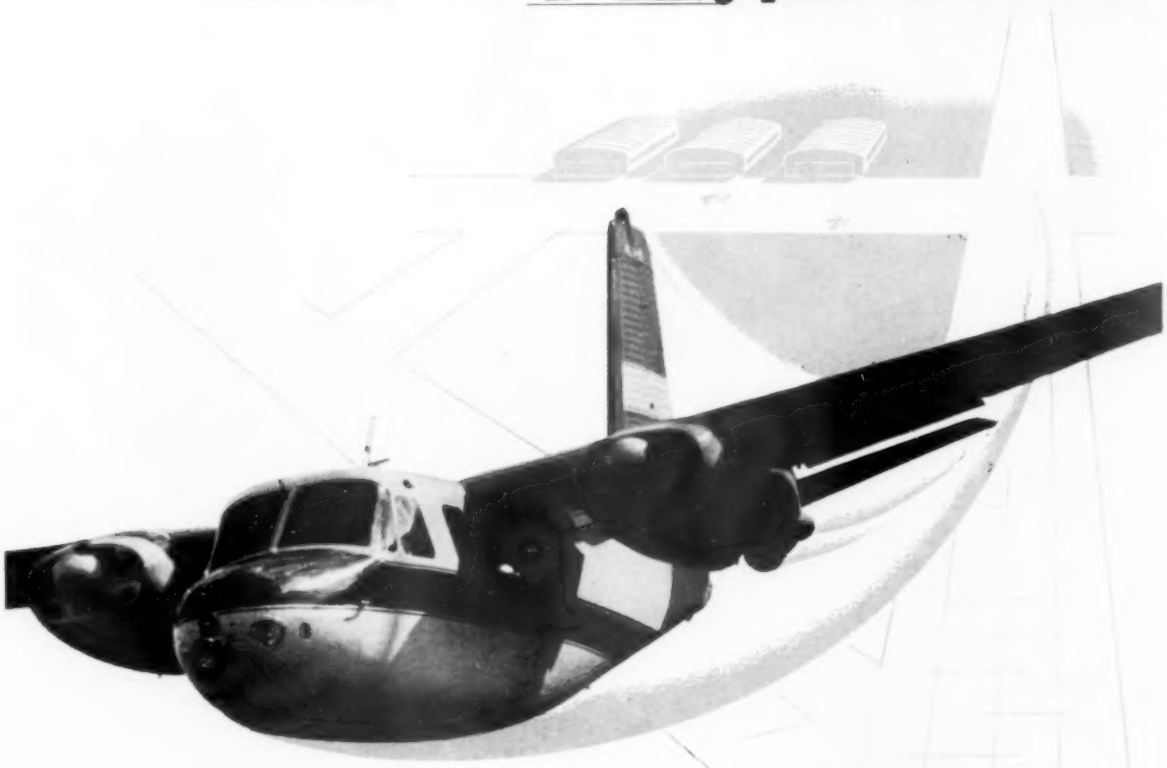
**Oil importers can expect another "Flemming letter" within a week.** But there will be no top-level decision on government restrictions until President Eisenhower can consider the problem himself. A letter announcing hearings into the whole question is likely. And this time, all of the important importers—not just the original 18 queried—will be on the receiving end.

**House antitrusters may get into the imports squabble.** The House antimonopoly subcommittee is keeping an eye on developments at the Office of Defense Mobilization. Chairman Emanuel Celler (D., N. Y.) is expected to bring up the "consumer" viewpoint at hearings into the role of the National Petroleum Council sometime this fall. Any voluntary solution to the imports problem may be challenged on antitrust grounds.

•

**Strategy is set for next year's natural gas battle:** Bring the bill to a quick vote in the Senate, and get it through without amendment. The General Gas Committee sizes the situation up this way: Legislation removing producers from direct federal control barely squeezed by the House last session. If the Senate amends the bill, it will have to go back to the House, where it's highly doubtful it could be passed again.

# now *Supercharged* performance



**MORE SPEED**—230 m.p.h. @ 70% power (260 m.p.h. maximum). **MORE RANGE**—1400 miles normal range (1600 miles maximum). **MORE LOAD**—7,000 lbs. gross (2750 lbs. usable). These are but three of the outstanding features in the new supercharged

## *AERO Commander 0-680-Super*

For complete information see your nearest Aero Commander distributor or write for Catalog 131-S

AERO DESIGN & ENGINEERING CO • TULAKES AIRPORT • P.O. BOX 118 • BETHANY, OKLAHOMA

# WATSON-STILLMAN FORGED STEEL FITTINGS FOR: *Safe, Tight Connections* in pressure piping

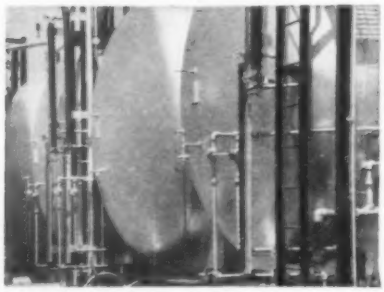
■ In high pressure steam lines... process liquid and gas piping... hydraulic fluid lines... wherever strong, tough pipe joints are needed. Watson Stillman Forged Steel Fittings provide a safety factor against costly piping failures. They resist pressure, heat, corrosion, shock and vibration because they're drop-forged of high quality steel to produce a dense, tough, forged-fiber structure that can really take it.

Extra strength is built into W-S fittings in other ways too... such as the heavy reinforcing bands extending well beyond the threads or sockets.

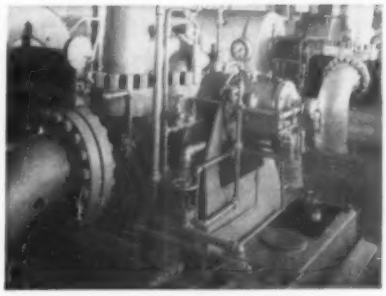
Protect your high pressure piping system with Watson-Stillman Forged Steel Fittings. Available in carbon, stainless and alloy steels, in Screw-End and Socket-Welding Types to meet your service requirements. Send today for Free Catalogs.

Bulletin A3-50—Forged Steel Fittings
Bulletin S-1-55—Stainless and Alloy Fittings
Bulletin U-1—Forged Steel Unions
Bulletin S-3-55—150 lb. Stainless Fittings

**Sold Through Leading Distributors**



• *Process Liquid and Gas Piping*



• *High Pressure Lines*

**WATSON-STILLMAN FITTINGS DIVISION**

**H. K. Porter Company, Inc.**
**Roselle, N. J.**

- **Refiners: They Scurried to Fill the Products Gap**
- **Marketers: Saw Supplies Tighten, Prices Strengthen**
- **Producers: Problems Arose from Texas to Colorado**
- **Transporters: Made Quick Shifts to Keep Oil Moving**

## THE WHITING FIRE ....

# The Whole Industry Feels Its Effects

**At 7:00 a.m. on Aug. 27, the major disaster signal was sounded at Indiana Standard's Whiting refinery. The three-long-blast warning was heard 'round the industry.**

Just 48 minutes before the disaster signal, a five-month-old $8-million Orthoformer had exploded. The unit, a regenerative-type cat reformer, was nearly demolished. Ensuing fires set off about 750,000 bbl. of oil, folded in 70 tanks, ruined two pumping stations and a gasoline treating plant. About 10% of the refinery area proper was put out of commission.

Pull the plug on the biggest refinery in the Middle West, and lots of things happen fast. A gasoline shortage in Chicago springs up overnight. A producer in Colorado has a hard time meeting his bank loans. A terminal operator in Arkansas pays 15% higher rates for barge transportation. A small town in Texas is threatened with a cut-off in its supply of natural gas.

**The six-week aftermath of the Whiting fire has demonstrated that no single branch of the industry can stand by itself. On crude oil alone, the company was unable to resume full taking of allowables, which it had cut back right after the explosion, until Oct. 1.**

The big Whiting refinery is like a balance wheel in a complicated mechanism. It is trail's end for crude trunk lines that tentacle out to West Texas and New Mexico. About as fast as a man can walk, sweet and sour oils flow into Whiting from all over Wyoming and parts of Colorado.

Whiting also straddles the northeast fork of a company-owned products pipeline that starts at the company's Neodesah (Kan.) refinery. The line pours products over North and South Dakota, Iowa, Minnesota, Illinois, and southern Indiana.

## 1. Producers Hit First

**When Whiting shut down for repairs, the gate valve was closed on 200,000-odd b/d of incoming crude oil. The immediate sales loss in Texas alone was 80,000 b/d.**

Standard's first move after the fire was to cut back its crude oil purchases sharply. Its affiliate, Stanolind Oil Purchasing Co., reduced its takings by 45% of allowables from leases in Texas, Oklahoma, Kansas, Colorado, Wyoming, Nebraska, and New Mexico. The company was plagued all through September about what to do

with surplus semisweet and sour oils of West Texas origin.

Said Olin Culberson, Texas Railroad Commissioner, at the September proration hearing at Austin, "It seems to me that this is an industry-wide problem." Major crude buyers in Texas, after a long supply discussion, agreed to soak up 60,000 b/d of the September allowables that Standard couldn't take.

**Other states felt the impact, too.** Standard's 21,000 b/d cutback in New Mexico amounted to about 10% of the state's total production. In Colorado, W. W. Flenniken, an independent producer, said reduced sales of crude "have forced us to review and revise our operations in accordance with lower income." Stanolind's takings in Colorado were cut in September to 2,600 b/d, or from 125 b/d to 69 b/d at the wells affected.

## II. The Big Need: Gasoline

**Standard's most pressing need was gasoline. As luck would have it, the industry was able to crash through with supplies a-plenty. If the fire had occurred two months earlier, the story would have been different.**

All through the summer, Midwest marketers had been trying to lick spotty shortages in the Great Lakes Pipe Line area. District II refinery runs were stepped up to an average of 2.2-million b/d through most of June and July. River towing from the Gulf, mostly in gasoline service, also was operating at near capacity right through August.

By the time the Whiting fire took place, the Midwest gasoline squeeze had been whipped. The industry was ready to give Standard the product it needed.

**Standard immediately set about obtaining—in an orderly fashion—gasoline to keep its customers supplied. This heavy draft on other refiners will affect Midwest manufacturing all through the winter.**

The company put three general proposals to its rival marketing companies: (1) Process crude for us; (2) lend us product; or (3) sell us product.

The first two deals were not acceptable to most Midwest refiners. For one thing, many refineries already were running at near capacity; they couldn't handle outside crude. The loan deal wasn't too interesting, either, for the average company was not eager to part with gasoline that would be repaid in the off-season winter months.

**However, Standard was able to buy what it needed.** In the five weeks following the fire, Standard picked up —mostly through outright purchase— an estimated 2.5-million bbl. of gasoline alone. When the final count is in, Standard expects, by the end of this year, to have purchased about 4.5-million bbl. of products.

The material is coming from all over —from Chicago, Lawrenceville, and Wood River in Illinois, from Toledo, Ohio, from Freeport, Tex., from Lake Charles, La.

An example of how a disaster in an industry is felt in "waves" turned up in early October cargo trading at the Gulf. Demand showed up suddenly for five cargoes of gasoline. The buyers were companies that had heavily supplied Standard right after the outbreak of the fire.

Gulf cargo traders say that gasoline already is in tight supply well into November, an off-season development they attribute directly to the Whiting fire.

**The price impact of the fire, strangely enough, showed itself first on the East Coast.** On Sept. 21, Socony Mobil advanced its prices 0.5¢ a gal. in 11 eastern states. The increase was based on improved gasoline markets, particularly in the Gulf Coast area, which supplies a big chunk of the gasoline consumed in the East.

**By a reverse twist, Standard's heavy purchases of gasoline probably will spell plenty of distillates in the Midwest this winter.**

The Midwest already is the longest spot on distillates in the nation, thanks to the high rate of refinery runs all summer. Now that gasoline consumption is on the wane, many Midwest refiners feel that runs must be pared down, and this could be done without impairing the distillate supply position. But when they discover a brand new gasoline outlet, via Standard, the temptation to maintain high refinery runs is strong. The result: more distillates than originally expected.

## III. Product Movement Up

**The company's product deficit in the Chicago area resulted in a marked increase in pipeline activity. It also hastened the sale of an 85-mi. $300,000 trunk line in Oklahoma.**

While the fires still were burning, Robert E. Wilson, board chairman, said that the company's system of interlocking product pipelines would be used to increase product flow from Standard's other refineries to the Chicago area. The Whiting refinery normally pumps products west to Chicago and to the company's terminal at Rochelle, Ill. This movement was stopped shortly after the fire so that the flow in the line could be reversed and products be moved to Whiting from the Sugar Creek and Neodesha refineries. The territory normally served from Sugar Creek and Neodesha was transferred temporarily to the company's refinery at Casper, Wyo.

In Oklahoma, Midland Cooperative suddenly closed a deal to buy a short trunk line near Cushing from a Standard affiliate. By taking immediate possession, the cooperative will be able to pick up September crude oil that producers along the line otherwise would have had to cut back on because of the fire.

**Mississippi River barge rates right after the fire hit new highs since 1948.** River towing rates have been firm all summer. They ranged from 0.225¢ to 0.25¢ per ton-mile this spring, and gradually worked up to 0.275¢ in late August. Within two weeks after the fire, several river charters were arranged at 0.3¢ per ton-mile. This represents an increase of about 15%. Getting supplies to Whiting by barge was complicated by low water on the Mississippi and Illinois rivers.

## IV. The Long Road Back

**There was a lot of there-but-for-the-grace-of-God-go-I philosophy in the way the industry responded to Whiting. For every refiner knows that rehabilitation of a major plant is a long and costly procedure.**

The fire's history itself says that expensive repairs are in order. Whiting was completely shut down from Aug. 28 to Sept. 9. The fire burned eight days and five hours, 30 hours of this time out of control. Between Sept. 9 and Sept. 24, operations were coaxed back to about 100,000 b/d, not quite 50% of normal capacity.

The principal loss was the Orthoformer. This vessel, 26 stories high, had a design charge of 25,000 b/d. It was believed to be the largest pressure vessel ever built, containing over 500 tons of steel. The central pump house of the plant, a nerve center, was knocked out completely.

In addition, Standard will have to tighten up markedly on its use of storage, for lost tankage amounted to about 700,000 bbl. Standard's stockpile of tanks at the time of the fire were "very little compared with the need." It was fortunate that Standard was able to divert to Whiting a large number of tanks intended for affiliate American Oil Co.'s new Yorktown (Va.) refinery.

Standard says delivery schedules of equipment over the next three months are "generally satisfactory," although all of its requirements are not yet

covered by firm orders. Pipe and fittings are high on the list of Standard's needs for repairs.

**A disaster always raises the question: How many eggs for one basket?** Oil men all over the nation are pondering how wise it is to concentrate a company's refining facilities in a few monster plants. And yet, this is the trend in recent years, with plants being located farther and farther from purchasing fields. In 1954, the refining capacity of the nation was expanded by 400,000 b/d, but the number of plants declined from 337 to 326.

Up to 200,000 b/d, there are definite savings in per-barrel costs, of both construction and operation. But when disaster strikes, the losses and disruptions are proportionately greater.

Standard says the question of duplicating the giant Orthoformer that was destroyed "is still under consideration and no decision has been made."

## PETROLEUM COMMENTS / By W. M. Jablonski

# Hang Your Clothes on the Hickory Limb . . . ?

The recent questions regarding independent imports of Iranian oil point up a significant ramification of any U.S. policy decision on oil imports.

From the start, it has been widely recognized in industry discussions that any "quota" program, whether voluntary or compulsory, that sought to stabilize individual importers' volumes to their 1954 ratios would work inequities against the smaller and newer importing companies. Serious questions could be raised about any official U.S. policy that in effect penalized companies for not having imported earlier, or that froze smaller refiners at a competitive disadvantage against the major, established importers.

But there is also another important angle—over and beyond the matter of imports by new "purchasers": imports by new U.S. "producers" of foreign oil.

* * * *

The question is, can this country in good faith adopt any import policy that would make it virtually impossible for smaller U.S. companies to develop their own oil production abroad?

For some years now, the U.S. government has made it a definite policy to encourage independents to seek oil reserves overseas—in order to broaden American ownership of foreign oil beyond the handful of big major companies. A score of independents have gone abroad recently. They are now pouring tens of millions of dollars into such regions as the Persian Gulf, southern Arabia, Egypt, Ethiopia, Latin America.

These U.S. independents venturing abroad own no foreign market outlets, of course. Nor do most of them have an established U.S. import position. How can they afford to risk their stockholders' money overseas without some reasonable assurance of a market for that oil—at home if not abroad?

Obviously, any import policy which allowed no flexibility for newcomers would amount to a virtual ban on independent U.S. operations abroad. It would be tantamount to making foreign oil reserves the exclusive domain of the large, established companies.

* * * *

Current new imports by independent members of the Iranian oil consortium are a case in point.

When the consortium was set up last year, the U.S. government deliberately sought wider participation, beyond the original major international companies. So 5% of the American share was set aside for independents. Nine companies took up that offer this May (American Independent, Atlantic Refining, Hancock, Pacific Western, Richfield, San Jacinto, Signal, Sohio, and Tide Water). They put up $7.5-million for it.

For Washington to frown now on such imports, after inviting these firms to invest in the venture, would be like saying "Hang your clothes on the hickory limb but don't go near the water."

* * * *

The Iranian question is significant more for the principle it raises than for the volume of potential imports involved.

There's no particular issue involving the major consortium members. They are all established U.S. importers. What counts in their case is their total imports —not how much of that total comes from Iran and how much from their other Middle East areas.

And the total amount involved in the independents 5% share is small. All told, it adds up to only 15,100 b/d this year, 23,750 in 1956 and 30,200 in 1957. (About 40% of this was to be taken in the form of refined products. However, eight of the nine independents have now sold some of their gasoline to Iran, and swapped the rest of their products for crude.)

Nor will all the 5% share be imported here. Best guess of parties concerned is that the group, as a whole, may be able to sell overseas as much as 40% to 50% of its total 1955 slice if current negotiations are successfully concluded. This would mean that only some 7,000 b/d to 8,000 b/d of their 1955 share would have to come here (though this volume will appear larger because the independents will have to lift their entire 1955 commitment in the last half of the year).

* * * *

The question of maintaining import flexibility for newcomers in foreign oil production is, of course, only one of many ramifications of the whole complicated import problem now being studied by Washington.

But it is one that requires careful consideration because of its impact on the whole U.S. policy toward independent foreign oil operations.

*Texas Eastern signs with Pemex, and . . .*

# Mexican Gas Heads This Way

**Two things are apparent from the deal last week between Petroleos Mexicanos and Texas Eastern Transmission Corp.: Pemex will get badly needed capital for an ambitious drilling program in Mexico, and Texas Eastern will get gas for its continually expanding eastern market.**

People in the gas and oil business have been hearing rumors of the transaction ever since the two firms started negotiations in March, 1953. The contract was signed last week in Mexico City, but will not go into effect until the Federal Power Commission approves Texas Eastern's part of the deal.

Here are the details of the contract: At the start, Pemex will sell to Texas Eastern 100-million cf/d of natural gas from its Reynosa gas-absorption plant. Pemex is obligated to offer an additional 100-million cf/d to Texas Eastern as additional reserves are discovered. (The Reynosa plant was scheduled to be officially completed last week, with a daily capacity of 300-million cf/d.)

Texas Eastern will pay 14.2¢ per Mcf the first year; the contract has an escalator clause that provides for a price increase each year. Initially, Pemex will receive approximately $5-million a year from Texas Eastern. The contract is for 20 years, starting with the date of first delivery. When it becomes effective, it will mark Mexico's first exportation of gas.

**For Pemex, the deal came at an opportune time. Committed to a drilling program for 1956 that is twice the size of this year's, the Mexican government oil monopoly found itself, apparently, without sufficient funds to activate it.**

Pemex announced its drilling program in July (PW—Jul.29'55,p29). It has scheduled 750 new wells for 1956, more than twice the 365 wells planned for 1955.

Observers point out two things about this development: that Pemex will do well to complete 325 wells of the 365 planned for this year; and that the monopoly has expensive programs underway to solve Mexico's transportation and refining problems.

With these programs in operation, the 1956 drilling program might have been hard put—until the Texas Eastern deal materialized.

**At the same time, Pemex has a gas-absorption plant capable of turning out 300-million cf/d of gas—and no outlet for all its gas.**

Right now, a Pemex gas line supplies Reynosa gas to Monterrey to handle needs for that city, one of Mexico's largest industrial centers. Pemex plans to extend the line to Torreon next year. But again observers point out that, at present, the very most that Mexican consumers can use of the gas is about 100-million cf/d. With that in mind, Pemex sought a big outlet—in this case, Texas Eastern. Some observers even feel that the Reynosa plant was built with exports primarily in mind, and that consequently it will have few Mexican customers.

**Here's another possibility that may affect American oilmen: With money practically in its pocket, Pemex will be in the market for drilling equipment for its 1956 program.** There's practically a line of equipment suppliers waiting outside the Pemex door now.

Several U.S. manufacturers of oil equipment have applied for financing of export sales to Pemex through American Overseas Finance Corp. (PW—Sep.16'55,p26).

AOFC is a five-bank operation organized as a means of supplying financing facilities to U.S. manufacturers and exporters.

**Texas Eastern's exact plans for marketing the Mexican gas will not be known until it files for a permit with FPC.** The corporation says it will do so "at the earliest possible date."

Texas Eastern still has to build facilities for receiving gas from Pemex at the Rio Grande River. And Pemex will build a short line from the Reynosa plant to the Mexican border to meet Texas Eastern's lines.

# Army Plans New Fuels Program

**The Army is drafting a long-range fuels policy aimed at reducing the number of fuels used in army motor vehicle, aircraft, and diesel engines.**

The purpose is to ease the problem of logistics—to keep at a minimum the various types of products the Army must transport and store.

Many details are still being ironed out. But later this month, the Adjutant General's office will issue a letter setting forth the Army's policy.

**The plan is to specify the fuels the Army wants to use in the future, and to request that new equipment be designed to use them.** Thus, the approach is to design the engines to the fuel, rather than the traditional practice of tailoring the fuel to the engine. In general, the new policy boils down to this:

- Aircraft engines—For low-output reciprocating engines, only Grade 80 aviation gasoline will be used; for higher-output reciprocating engines, 115/145; for turbine engines, JP-4 fuel. Use of 80-octane motor fuel in aircraft and Grades 91/96 and 100/130 will be eliminated.
- Diesel fuel—The standard fuel will be 40-cetane.
- Gasoline engines for motor vehicles—If possible, the aim will be to limit gasoline to 90-octane by the motor method, 100 by the research method. For the most part, commercial-type vehicles will use gasoline close to civilian grades; use over 90/100 won't be allowed.

So far, no changes are planned for lubricants. Reason is that the new fuels policy is aimed at future engines still on the drawing boards; designers still don't know what lubricants will be required. In helicopters, however, army experts plan to use the same oil in transmissions as in engines (Mil-L-7808).

**The new policy isn't likely to affect current petroleum procurement, and the Army emphasizes it is not rewriting fuels specifications.** Says one official: "Under our previous lack of controls, we have been using and planning to use more fuels than we can handle logistically."

One Defense Dept. petroleum expert is skeptical about the Army's plans, says it's "futile" for one service to go ahead on fuels policy unless the other two follow suit. He says the Air Force and the Navy know about the Army plans, and hopes "they will see the handwriting on the wall."

**The Navy and the Air Force say they are already standardizing on use of fuels,** thus reducing the types to be procured—even though they have no special project such as that being planned by the Army.

In the Navy, only navy special fuel oil and marine diesel fuel oil are used in ships. For aircraft, officials say JP-4 can't be used by carrier-based planes. At present, naval jet craft use a mixture of aviation gasoline and jet fuel. Eventually, JP-5 will be used exclusively.

In the Air Force, in addition to the aviation fuels listed in the new Army aircraft policy, 91-octane and 100-octane are also used.

# What's New / IN THE INDUSTRY

## Controls Hurt Gas

**Natural gas supplies have already begun to dwindle after only one year of federal control of natural gas production.**

John W. Boatwright, Standard Oil Co. (Ind.) economist, told the Mid-Continent Oil & Gas Assn. this week that at least three key trends show the impact of government regulation:

- New commitments of natural gas to interstate pipeline carriers are falling off sharply—in 1954 they were only slightly more than a third of the 1953 total.
- Fewer gas wells are being drilled. Completions are running 12% behind last year; gas development wells are 13% below a year ago. Meanwhile, over-all drilling has increased 6%—showing the increased emphasis on oil, rather than gas.
- Funds for natural gas development are drying up. Some banks are still willing to make loans on natural gas properties but they are becoming more and more cautious in evaluations.

•

## Labor Eyes New Goals

**Labor activities took on increased importance this week as unions jockeyed into position for a more unified approach to bargaining.**

The Central States Petroleum Union, representing Standard Oil Co. (Ind.) employees, was meeting at mid-week and had already set its sights on a 15¢-an-hour wage hike. It is trying to form a coalition with other unions to help back the drive.

A council of unions in The Texas Co., meeting in Denver last week, urged the Oil, Chemical & Atomic Workers Union—of which the council is a part—to initiate an industry-wide campaign for a general wage increase and many fringe benefits.

The council proposed that all locals seek a contract to require Texaco to pay for many employee benefits.

The council also called for more cooperation and more coordination with nine Texaco pipeline groups which are not now members.

Marketing has its labor problems, too. The Teamsters Union (AFL) is seeking to organize more service station attendants as part of a joint campaign with the AFL Machinists to sign up new members in the auto sales and service industries. Each union will spend $100,000.

In Philadelphia, representatives of Local 596, Teamsters Union, this week walked out on negotiations with Gulf Oil Co. for a new one-year contract for over 100 employees of 12 company-owned stations.

•

## What Is Our Reserve?

**The "dependable reserve capacity" of the domestic oil industry may be nearer 600,000 b/d than the commonly used estimate of 2-million b/d,** Albert L. Nickerson, president of Socony Mobil Oil Co., Inc., said this week. He used this as his reasoning:

During and immediately after World War II the annual rate of production never significantly exceeded 8% of the U. S. reserves. It is assumed that this type was at or very near the upper limit of efficient productivity. It's unlikely that, today, we could produce more than 8% of our proved reserves each year on a sustained basis.

Last year the industry produced 2,560,000,000 bbl. of oil and natural gas liquids in the United States; 8% of our reserves would be 2,780,000,000 bbl. The difference between these two is 220,000,000 bbl., or 600,000 b/d.

The 2-million b/d figure may represent the country's reserve capacity to produce oil at any given time, for a few months. But the 600,000 b/d figure appears to be a more realistic estimate of the country's dependable reserve capacity to produce oil at maximum efficient rates over time.

Nickerson's remarks on reserves were part of a talk he gave this week before the Dallas meeting of the Mid-Continent Oil & Gas Assn.

•

**Total demand for all oils is expected to average 9,125,000 b/d in 1956, a gain of 378,000 b/d over the anticipated demand this year.** This forecast was made this week by John G. Winger, petroleum economist of the Chase Manhattan Bank, at the fall meeting of the petroleum branch of the American Institute of Mining & Metallurgical Engineers, in New Orleans.

Total new supply (domestic output of crude oil and gas liquids plus imports) will have to average 9,196,000 b/d next year, up 397,000 b/d, to meet the expected demand and to provide adequate year-end inventories, according to the forecast. Refinery runs will have to average 7,824,000 b/d, a gain of 337,000 b/d over the estimated 1955 average.

•

**United Oceanic Corp. got final clearance last week to build eight tankers for charter to the Military Sea Transportation Service.** The General Accounting Office investigated the handing of bids by MSTS and said they were "proper in all respects." Originally, MSTS asked bids on 15 tankers under the charter-build program. It awarded Oceanic a contract for eight ships (PW—Jul.8'55,p16), and rejected bids of three other companies. The rejected bidders protested, and GAO was asked to investigate.

•

**Standard Oil Co. (N. J.) and its U.S. affiliates have organized an Esso Education Foundation** to coordinate their program of aid to privately supported colleges and universities. The foundation has received initial pledges for $1.15-million for 1955.

•

**Another steel-pipe manufacturer wants to get in on the growing demand for pipe in western Canada.** Fluor Corp., Ltd., of Los Angeles, operating through a subsidiary, Prairie Pipe Co., will build a plant near Regina, Saskatchewan. Only recently, a German firm revealed plans for the first pipe-manufacturing plant in that region (PW—Sep.9'55,p34).

•

**Creation of a Dept. of Mineral Resources in the U.S. government has been proposed** by a Senate Interior subcommittee. The department, which would apparently include petroleum activities, would be headed by a secretary with Cabinet rank.

•

**Some important issues affecting oil will be decided by the U.S. Supreme Court during its fall session.** They include the offshore boundary controversy between Louisiana and the U.S. and the alleged racial discrimination in oil labor unions.

# Pellet Drilling Holds Promise

**A drilling method that pulverizes rock through bombardment with steel pellets has been successfully laboratory tested.**

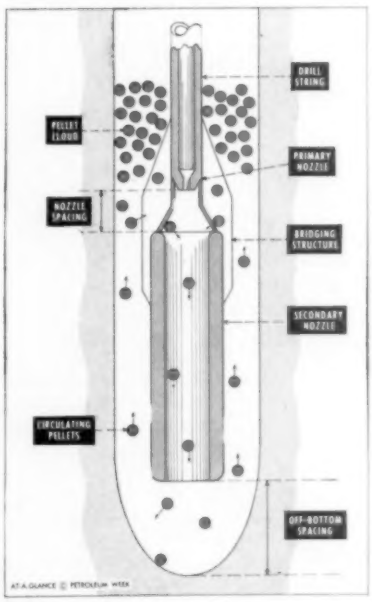
Details of the technique, developed through 37 man-years of research, were disclosed this week at the New Orleans meeting of the Petroleum Branch, American Institute of Mining & Metallurgical Engineers. Presenting the paper were J. E. Eckel, F. H. Deily, and L. W. Ledgerwood, Jr., of Carter Oil Co.'s Tulsa research laboratory.

**Two nozzles, one above the other, utilize the drilling fluid to circulate pellets at the bottom of the hole. The pellets are shot at high velocity downward against the formation** (diagram, right). A modified jet pump supplies the motive power for carrying and recycling the pellets, which do not return to the surface.

**Here are some of the advantages** visualized for the new technique:

- **Time would be saved.** The pellets can be continually replaced without hoisting pipe out of the hole.
- **There would be less equipment, less wear-and-tear.** No rotation is required, thus reducing drill-pipe failures and allowing use of lighter drill pipe and simpler tool joints. No bit weight is required, so the cost of operating and maintaining drill collars would be eliminated. The investment in rig structure, drawworks, and engines would be reduced, since there is no need for high-speed hoisting of heavy load.
- **Transportation, manpower, and fuel costs would decline.** The rig would be lighter, requiring less fuel, less labor in rigging-up.

At the same time, the pellet drilling system retains one major asset of the rotary system: use of a drilling fluid to remove cuttings, maintain the wall of the hole, and control formation pressure.




**PELLET DRILLING causes rock failure by the rapid, random blows of high-velocity pellets. The pellets used in tests were of ⅜-in. diameter.**

## Removing Sulfides

**Aeration with exhaust gases supplied by a submerged combustion unit is helping Gulf Oil Corp. remove harmful sulfides economically from large volumes of water.**

Gulf is water-flooding the Yates formation in the North Ward-Estes field, Ward and Winkler counties, Tex. At the peak, about 150,000 b/d of water will be needed, W. J. Hart and R. G. Wingate, of Gulf's Ft. Worth offices, told the AIME meeting. The only feasible source is the Hendrick Reef formation, which contains only sour brine in this area. This brine has a high concentration of sulfides. Thus, corrosion would present a formidable problem. In addition, the Hendrick Reef water is totally incompatible with formation water from the Yates.

**Chemical treatment was too expensive and simple aeration not feasible. So Gulf developed its exhaust-gas method.** Here's how, and why, it works:

If water is acid in reaction, sulfides in it exist in the form of hydrogen sulfide, which simple aeration removes easily and cheaply. The trouble is that simple aeration removes dissolved carbon dioxide even more easily. As carbon dioxide is removed, the water tends to become alkaline instead of acid. And in alkaline water, the hydrogen sulfide changes to an alkaline sulfide, which is not readily removed by aeration. Also, considerable oxygen may be introduced into the water by aeration, and oxygen in water can be as undesirable as sulfides.

The basic unit of Gulf's system is a generator in which gas is burned in air, under the water. The exhaust gases resulting from the burning are very rich in carbon dioxide. As they rise through the water, they scrub the hydrogen sulfide from the water and, at the same time, they keep it supplied with carbon dioxide, and therefore acid.

Gulf built a scale model, found it worked, and built a pilot plant with a maximum flow of 5,300 b/d. At 5,000 b/d, it found, 97% of the sulfides are removed.

Cost of treating raw water is 1.89¢ a bbl. at the 5,000 b/d rate. But at 50,000 b/d, Gulf estimates, because of the lower unit costs of labor and materials, the cost would be only 0.1¢ per bbl.

## New Cementing Tool

**A retrievable wire line cementing tool that uses explosive gases to force cement into position has been put into operation by Welex Jet Services, Inc., Ft. Worth.**

Details and performance data on the new tool were contained in a paper presented before the AIME by Blake M. Caldwell and George E. Briggs, Jr., of Welex. Gases from the burning of a high-energy propellant expand a rubber packer against either casing or an open hole section. Further gas expansion shears an aluminum retaining plug from the bottom of the cement container, forcing cement into the desired position. The complete tool is retrieved from the well except for the small aluminum plug and gun seal. Additional cement "runs" may be made for additional cement fill.

The tool has been used successfully to eliminate bottom-hole water from an open hole section; to perform "squeeze cement" jobs on either partial or complete sets of perforations; to squeeze leaky casing shoes; to seal leaky bridging plugs; and to seal channels in the annulus.

Advantages claimed for the tool also include savings in rig time, reduced danger of sticking equipment in the hole, and pin-point placement of the cement.

The authors say the tool has been used to seal off zones ranging from 2 ft. to 168 ft. thick. The thicker sections were plugged by blocking off the lower portion with sand or pea gravel or by setting a bridging plug and squeeze-cementing a plug above.

As an example of a thin-zone remedial worker, the authors say that 2 ft. of a 3-ft. open-hole section in a well in the Chalk Hills field in North Central Texas was successfully cemented with two sacks of cement. Water production was reduced from 50% to 4%.

*API study group hopes . . .*

# Automatic Crude Transfer Near

**Automatic transfer of crude from the wellhead to the pipeline—the long-needed missing link in complete automation of production—may soon leave the pilot stage and become an accepted field practice.**

It has been generally conceded by production experts for several years that development of automatic production facilities has lagged seriously behind automation of pipeline operation and refinery processing.

**A special API study group, set up in 1952 to consider the problem, met in Tulsa this week to pound out the final draft of an "information bulletin." This will be a report on procedures which have been found satisfactory.**

The committee on Lease Automatic Custody Transfer is composed of Howard L. Shatto, Shell Oil Co., New York, chairman; R. C. Buchan, Humble Oil & Refining Co., Houston; C. E. Curry, Sohio Pipeline Co., St. Louis; R. A. Hamill, Service Pipeline Co., Tulsa; D. C. McKinley, Interstate Pipeline Co., Shreveport; D. C. Meyers, Shell, Midland; Sam Pope, Gulf Oil Corp., Wichita; J. W. Tinnin, Texas Pipeline Corp., Wichita Falls; Joe Zaba, Stanolind Oil & Gas Co., Tulsa; and G. A. Smith, Shell, Tulsa, alternate.

This group operates under the main committee on crude oil measurement, of which H. C. Packard, Shell, New York, is chairman. Under the general direction of J. H. McClintock, Esso Standard Oil Co., New York, it has been collecting information from individuals and companies who have been experimenting with automatic-control transfer equipment. Its purpose: to evaluate the various methods that have been used on an experimental basis.

**The study group will make its report at the annual API meeting at San Francisco in November.**

Originally, the group was to investigate the practicability of ACT and make recommendations on procedures. However, the study disclosed that it is still too early to adjudge the various techniques, so the term "information bulletin" was substituted.

**Automatic custody transfer means, simply, the automatic determination of both quantity and quality of crude and the automatic control of its flow into a pipeline at an unattended operation.**

Several companies have sought the answer to the problem, among them Humble, Shell, Gulf, Stanolind, Texaco, and Imperial Oil, Ltd. Since they've all worked separately, the techniques vary considerably.

Basically, however, two methods are being used: positive displacement metering, and tank metering by running fixed volumes from stock tanks.

In either case, the volume measurement is corrected or compensated to standard temperature, and a sample is taken for determination of bottom sediment and water content and API gravity.

One tank metering technique that has received favorable comment operates by establishing fixed levels through overflowing to a machine "weir" level. Before the oil is lowered to the fixed level, the tank is filled to a point slightly higher and the oil is permitted to settle.

Automatic custody transfer has many possible advantages over manual transfer. One of the most important is the obvious factor of time saved through gauging.

**The technique will enable pipeliners to operate with a uniform load factor, a point which has encouraged big crude oil pipeline companies to active support of the committee study.**

Pipeliners are constantly plagued with varying load factors. With manual gauging procedures, crude runs rise and fall widely in the course of a 24-hour period. But with ACT, uniform operating pressures could be maintained over the entire 24-hour period.

**The producer can look forward to a reduction in the required volume of crude storage, depending on his particular need for emergency storage space.**

The producer can also hope for greater accuracy in gauging, simplification of computation and accounting procedures, and an improved schedule of runs accomplished in a predetermined time.

# Drilling Men Rap Turn-Key Idea

**Drilling contractors were given some advice last week by an expert on financing: Put yourself in the same position as a general contractor on a construction job. Deliver to the operator a completed well.**

The counsel came from Harold Vance, vice-president and manager, Oil & Gas Dept., Second National Bank of Houston.

Vance was talking at the Houston convention of the American Assn. of Oilwell Drilling Contractors about the financial troubles besetting some of them.

As a general rule, the contractor does little more than "make hole" for the operator. The operator plans, makes arrangements for, and pays for most services such as coring, testing, logging, cementing, etc., during the drilling of a well, and for perforating, storage, etc., at completion.

Vance urged, instead, that the contractor "do more turn-key drilling work." He used the analogy of a general contractor on a construction job who farms out specialized work such as plumbing, but still "is responsible for the over-all job and delivers the work according to specifications . . . ."

**The idea was not whole-heartedly accepted by the contractors, and here's why: Completing a well is an extremely complicated procedure calling for an intricate and expensive organization.**

Turn-key jobs were the prevailing practice years ago. But the practice faded with the influx of specialists sharing the responsibility for programming a well.

Talking to newsmen, E. Dale Mount, of Dallas, new AAODC president, summed up the contractors' reaction: The complicated nature of today's well-completion techniques would require the contractor to have a variety of specialists within his organization or on call. And Mount says he doubts that operating companies would approve of an operation in which they would lose day-to-day control over the project.

**The contractors were inclined to go along with Vance's other suggestions for successful financing.** He noted that the contractor usually has an easier time borrowing money under these conditions:

(1) Block contracting, where the contractor is handed a contract for as many as 15 to 20 wells at a time, with a reasonable net income specified on each.

(2) Prompt payment of the contractor's fee to eliminate the necessity of his borrowing money to "tide him over" until the operator finally makes payment.

(3) Securing by the contractor of some oil-producing property which the banks regard as sound collateral for long-term loans.

# What's New / IN PRODUCTION

## Drilling Highlights

**Texas Offshore**—The Atlantic Refining Co. and Tide Water Associated Oil Co. have abandoned at 12,029 ft. their Federal 1-726, 35 mi. east of Corpus Christi. It was South Texas' first test in the federal tidelands. The failure was drilled in the center of a 25,920-acre block.

**Southeast Texas**—Magnolia Petroleum Co. has abandoned efforts for a bottom-hole test at West Ranch 417-A, Jackson County. The operator was unsuccessful in recovering fish in the 19,060-ft. hole. Top of fish was at 16,836 ft. Now plugged back to 15,050 ft., the test will be further plugged back to 5,000 ft. for completion attempt in the Greta sand, original pay in the West Ranch field.

**Texas Panhandle**—Union Oil Co.'s J. Russell 1, 2¾ mi. northeast of the Farnsworth Morrow gas field, in an Ochiltree County oil discovery. On 13-hr. test of perforations at 7,954-62 ft., it swabbed 101 bbl. of 39-gravity oil. After being acidized, it made gas at a rate of 10,000 to 50,000 cu. ft. per day and swabbed 2 bbl. of 38-gravity crude per hr. for 10 hours through perforations at about 7,888-902 ft.

**West Texas**—Skell Oil Co. has requested a discovery classification for its producer 9 mi. southeast of Eskota, in Nolan County. The Boyd 1-C flowed at the rate of 62.10 bbl. per day of 42.5-gravity oil, natural, through perforations at 6,220-302 ft.

**West Texas**—A fourth producing pay has been opened in the Spraberry Trend area, Midland County, by Roy Furr, of Lubbock. The Driver 1-G pumped 104 bbl. of 30.3-gravity oil, plus 15.6 bbl. of water daily from the San Andres at 3,824-44 ft. Other pays in the field are the Spraberry sand, which produces in Midland, Upton, Glasscock, and Reagan counties; the Grayburg, productive in Midland County; and the Clear Fork, productive in Reagan, Glasscock, and Upton counties.

•

## Kerr-McGee Orders Barges

**A pioneer Gulf of Mexico operator last week emphasized his faith in the Texas-Louisiana tidelands by announcing that his company has ordered two giant new drilling barges.**

Speaking before the New York Petroleum Section, AIME, Dean A. McGee, president of Kerr-McGee Oil Industries, Inc., Oklahoma City, footnoted a recitation of recent accomplishments on the tidelands (PW—Sep.30'55,p16) with this observation: "Certainly these data illustrate the increasing tempo of offshore activity, and that the large-scale operations considered necessary to an adequate exploration of the Continental Shelf in the Gulf of Mexico are getting under way."

Afterwards, McGee revealed that his company has contracted with Ingalls Shipbuilding, Pascagoula, Miss., for two mobile units capable of drilling in 70 ft. of water.

Kerr-McGee already has two submersible units in operation, one capable of drilling in 25 ft. of water and the other in 30 ft.

McGee told AIME that on Sept. 1, 1954, there were 39 offshore drilling units available altogether, with 5 under construction. Today there are 52, including 10 mobile devices, 32 of the platform-tender type, and 10 of the self-contained platform variety. About 11 mobile units are under construction or "substantially ready to commence construction," he added.

McGee explained that the depth of water controls the type of equipment. "With existing models, the submergible barge is definitely limited to 40 ft. Because of high initial cost—up to $4-million—the large mobile devices being constructed for deeper water (up to 100 ft.) will not be competitive at depths of less than 40 ft. The floating tender-small platform approaches being a method that is usable competitively at all water depths."

•

**Proved reserves in the southeast Saskatchewan area fringing the Williston Basin are estimated at 45.1-million bbl. and probable reserves at 155-million bbl.** The estimates were released by three companies separately seeking permission from the Canadian Board of Transport Commissioners to build a 100-mi. crude line from southeast Saskatchewan to a pumping station on the Interprovincial line at Cromer, Man. Applicants are S. & M. Pipeline, Ltd., subsidiary of Canadian Devonian Petroleums, Ltd.; West Spur Pipe Line Co., subsidiary of Imperial Oil, Ltd.; and Trans-Prairie Pipe Lines, Ltd.

•

**Imperial Oil, Ltd., was the heavy bidder for exploratory permits offered by the Saskatchewan government.** Five companies paid $400,000 for 10 of the 15 blocks offered. An additional $16,800 was paid for first-year rentals at the rate of 2¢ an acre. Imperial paid $247,440 for four parcels of land, and $6,272 in rental fees.

•

**Tide Water Associated Oil Co. has added 2,200 b/d to its heavy crude production from California's Kern River field by reopening 102 wells.** The firm plans to reopen 500 more in the near future for a total increase of 4,200 b/d. The wells were shut in more than a year ago due to the drop in demand.

Tide Water will also boost its output of heavy crude by drilling 70 to 80 wells in the Pioneer-Kern River field, thus resuming a development program interrupted two years ago when the market fell off.

•

**Kansas' October crude allowable will remain at the September figure of 330,000 b/d, the Kansas Corporation Commission has decided.** The U.S. Bureau of Mines' forecast for Kansas' October demand was 340,000 b/d, up 4,000 b/d from the month-ago forecast.

•

**An October allowable of 720,876 b/d has been set by the Louisiana State Conservation Commn.,** up 15,335 b/d from September. North Louisiana was allocated 127,106 b/d and South Louisiana 593,770 b/d.

•

**The University of Texas will hold a lease sale on 38,200 acres Nov. 29.** Four tracts to be sold to the highest bonus bidders will require drilling within six months: a 9,300-ft. test on 2,617 acres in Reagan County; a 3,000-ft. test on 1,283 acres in Reagan County; a 2,000-ft. test on 1,969 acres in Crockett County; and a 7,000-ft. test on 2,639 acres in Pecos County. Rights are offered on other tracts in these counties, as well as in Anderson, Crane, Martin, Upton, Irion, Cooke, and Ward counties. The University of Texas will get one-eighth of all oil and gas produced and $1 an acre rental, in addition to the cash bonus.

*Fahey Flynn asks:*

# HOW CAN BUSINESSMEN HELP BUILD BETTER FUTURE CITIZENS?

**FAHEY FLYNN, well-known radio and television newscaster, WBBM, WBBM-TV, CBS, Chicago**

**LEE BAUER,**
**Standard Oil Agent,**
**Stonington, Illinois:**

"Out in the farming area, businessmen think mighty highly of such activities as 4-H and Future Farmers of America. They help these programs in any way they can because both organizations train young people to be better farmers and better citizens. My son is active in 4-H work and I have helped in the 4-H Tractor Program since it was started. The youngsters learn by doing and get a good start toward success."

**H. P. DENDEL,**
**Sales Manager, Consumer;**
**Standard Oil Company,**
**Indianapolis, Indiana:**

"The best way to help young people get a good start toward success is through organizations where you can reach the greatest number of people at one time. Junior Achievement, 4-H and Future Farmers of America are three outstanding examples of organizations helping large numbers of young people. Many of us at Standard Oil take part in these important activities."

**OLIVER C. FISCHER,**
**Standard Oil Voucher Clerk,**
**St. Louis, Missouri**

"Businessmen can give young people the benefit of their experience through organizations like Junior Achievement. Boys and girls from 15 to 21 form their own companies, issue stock, pay rent, and manufacture and sell a useful product. Men and women in business are their advisers. I have been a Junior Achievement adviser for more than four years and have seen many young people get successful starts in life."

**E. L. MILLER,**
**Division Automotive Engineer,**
**Standard Oil, Billings, Montana:**

"Efficient farming methods help to keep food prices down, so you can see how important it is to teach young people the best farming methods and the latest developments in agriculture. And, of course, this training also helps them toward success. That's why programs sponsored by 4-H and Future Farmers of America receive the support and active aid of businessmen out here. My company and I have been actively interested in both programs for many years."

**Thousands of Standard Oil employees voluntarily serve their communities in many important fields of youth activity. And the Standard Oil Company itself, through the Standard Oil Foundation, gives financial support to such character-building organizations as Junior Achievement, 4-H Clubs, and Future Farmers of America. These organizations help to train young people for successful careers on the farm or in the city. The Standard Oil Foundation also allocates funds to the state associations of independent colleges in 14 Midwest states and to certain universities. It has established scholarships and graduate fellowships. Among the Foundation's many other beneficiaries are such organizations as the National Fund for Medical Education, Community Funds, and the United Negro College Fund.**

**STANDARD OIL COMPANY** (INDIANA)

STANDARD

## An Expert*. . .

**on how men grow in their jobs has helped shape a new plan to meet the growing need for capable managers. It brings the new thinking in several big industries to the manpower problem shared by oil companies. It applies to your work, whether you are in the field or at headquarters, or handle many or few men.**

**Here is a summary by Petroleum Week of Muller-Thym's thoughts.**

Bernard J. Muller-Thym
Management Consultant

# A New Approach to Developing Men

**One of the most serious problems in business today—any business—is the man who should act, but for some reason doesn't. He escapes responsibility. And he marks time in his job. Why isn't he learning to manage? Mainly because he never gets any practice.**

As a result, industry is not developing enough capable men at an early enough age. Oil leaders recognize that they share this problem with other industries. It is a matter that reaches every level of management—presidents, foremen, superintendents, salesmen. And it is just as serious for small companies as for large ones. Executives everywhere voice a typical complaint: "I don't dare take that on because I don't have the people who can handle the job."

Some companies are making progress with the problem through their management development programs. But it is only recently that a few leading companies have begun to direct their thinking toward the main point:

**People learn to manage only by managing.**

Like the surgeon or violinist, a manager has to have practice in making decisions. It is not enough for a man to go to school or take a training course. He must come to grips with real problems, and act on them.

**What's the best way to develop good men? The starting point is a careful study of how the business is run.** The goal: To find out what is working well in improving men, and to do more of that. To find out what isn't working, and to do less of that.

This calls for a close look at the characteristics, experience, and working methods of the more capable managers, as compared with the less capable ones. And it involves a similar study of different departments. It means gathering significant examples of how work is done better. It can mean setting up working models of good practices to verify the findings. Only with such positive information can management consciously do the things that develop men the best.

Findings will vary with the company. But research by several leading non-oil companies along this line strongly suggests that the underlying factors are these:

- The company does not develop men. The men develop themselves.
- The most significant influence is the way the business is run. Company environment can either challenge men, or restrict them.
- The best methods of managing a business profitably are also the best methods of developing men.

In other words, men become good managers only when they can face real problems, on their own jobs, in an atmosphere that encourages action. And training is most effective when it is part of actual company operations—instead of a separate program.

**The management development programs of many companies are helpful because they lead men to think seriously about developing those under them.** Typically, these programs

### *B. J. Muller-Thym...

is a management consultant who has made a series of basic studies on how men develop at all levels—in any company. He has worked with leading corporations in the steel, business machine, and electrical equipment industries. He will start independent practice in November, after having worked for 10 years as an associate in McKinsey & Co. (management consultants with offices in five major cities). Muller-Thym is a lecturer in management at the Columbia University Graduate School of Business and at Massachusetts Institute of Technology.

consist of an organizational plan, job descriptions, appraisals, replacement tables and training of men through job rotation and special courses. Such programs keep good men from being buried. And they have spurred the study of better management in colleges and industry.

But some companies are beginning to recognize drawbacks. Since the goal of the typical program is to find and train replacements for key positions, promotion is stressed as the end result. This can take men's minds off the need for outstanding work on present jobs. Also, the selection system often concentrates on a few men who have the most obvious potential.

The most important drawback of all was pinpointed by the president of a large company when he said, "We have no evidence that our program really develops executives."

A plan for developing men based on a study of the company does not call for abandoning replacement tables and appraisals. But these become secondary to the main job of stressing what works and eliminating what doesn't work.

**In many companies there are trouble spots. For example, too many layers of management dilute job authority. Men down the line can't act on their own.** Too many people at different levels get involved in a program. Paper work multiplies. The executive at the top may say, "I want to delegate authority," and be sincere about it. He may arrange training courses in passing along authority. But the tendency in a heavily layered company is for authority to float upwards, away from the individual manager.

In some cases, a lower supervisor actually does act independently. But his decisions may be hidden from his superiors, and even from those under him. He doesn't develop, because he doesn't have to answer openly for his actions.

**Men's hands are tied when the company insists on elaborate reporting systems and rigid standards of work.** Some companies require daily reports from the bottom all up the line. The vice-president has everyone tracking a mistake or a departure from the standards.

The man who works in such a system isn't really managing. He might want to increase his department's maintenance costs above the company standard—in order to improve his total cost picture. Or he might simply want to try something new. He needs to have the freedom to break the standards for the good of the company.

He should also be left alone to do his job. This doesn't mean the superior should abdicate all authority, or leave the man to sink or swim. The superior should talk over in detail the job, the budget, and other standards. He should permit freedom beyond the standards, and clearly define the limits of this freedom. Then he should tell the man, "Get this job done in your own way."

In a highly functionalized system, people are very busy. They are operating like mad. They lack the time or the frame of mind to spot opportunities for improvement.

**Some men fail to grow because their jobs hold no real challenge—or the challenge has worn off. Others are held back because they have no chance to watch how decisions are made.**

The work of many managers presents few new problems. Even if crises come up, they are the old, familiar kinds of crises. The men no longer can make tough decisions. Such jobs may be fine for several years in allowing men to work in a new environment.

But there is a rhythm in the development of people. Sometime in the first few years of a job the fine edge of challenge wears off. Energy mobilization and learning are slowed. That's the time to start a man on new growth by giving him different work.

And occasionally there are men in isolated jobs who don't learn how to make decisions because they don't know how to go about it. Lacking contact with a capable superior, they literally have no good example to watch. And this is one place where the company study to identify its best men can pay off.

**"Good" managers should be placed throughout the company so that their actions are observed by the greatest number of people.**

The characteristics of such managers may vary somewhat with the operation. One analysis of men from foremen to vice-presidents showed that the better ones had these things in common: ability to learn, to adapt themselves, and to solve problems easily; willingness to stick their necks out; ability to gear a group into action.

A further study of the same group showed that the men who rose to top jobs had the qualities above to a greater degree, plus these others: imagination and ranginess of thought; ability to see things whole, and to formulate principles of action that could lead to new action; balance and poise in the face of trouble (they found some way to get the job done).

**How do good managers get like this in the first place? Research has shown that, often, the men who develop fastest, who are "discovered" soonest, and who go farthest in a company, are those who work in fairly small operating units that do a complete job.**

Usually the people in the unit have differing skills, such as engineering, finance, production, and accounting. They have a lot of face-to-face contact that cuts across functional lines.

The people in such units usually do the best work. They meet a crisis well. They tend to adopt the company point of view. And they readily conform to new policies.

**So the company's own study should be aimed at spotting such units and using them as models.** Ideally, all departments might be organized in this way. However, a company or a department can realize many of the same benefits by setting up project teams along the same lines. These teams would study actual problems. Men on the teams would come from different jobs and have different skills. Each team would be given a definite time budget, with the work to be done during regular office hours. In this way, they couldn't escape work by saying their regular jobs needed attention.

And the team would have a complete job. This would include analysis and research on the problem, agreement on what should be done, and real responsibility for putting the recommendation into effect. The work would not be just for the practice. It would be an integral part of the company's operation.

**The whole learn-by-managing approach adds up to decentralization. The aim is to create self-sufficient work centers that have considerable power to make decisions.**

Almost any responsible manager at any level can organize this kind of work. For a whole company, there would be an advantage in having an information center to speed the job of getting more men into projects.

Under decentralization, higher management may feel that it is losing some of its responsibility. Actually, just the opposite is true. Top men take on more vital roles than they had before. They are free for more over-all planning and for closer attention to the development of their people.

Re-education all the way down may sometimes be necessary than in not working. But people are more interested in working. They like to see their company progress. If you can show them how they can do the job better, they will cooperate.

What's in a drop of oil? Petroleum chemistry has found the answer to be without limits.

With petrochemicals, great strides have been made in producing better insecticides and pesticides, thereby enhancing the world's food supply. Petrochemicals brought about the successful synthesis of pharmaceutical compounds, making possible the mass production of life-saving drugs. New building materials . . . synthetic fibers and detergents . . . all of these are the results of continued research in the field of petrochemicals.

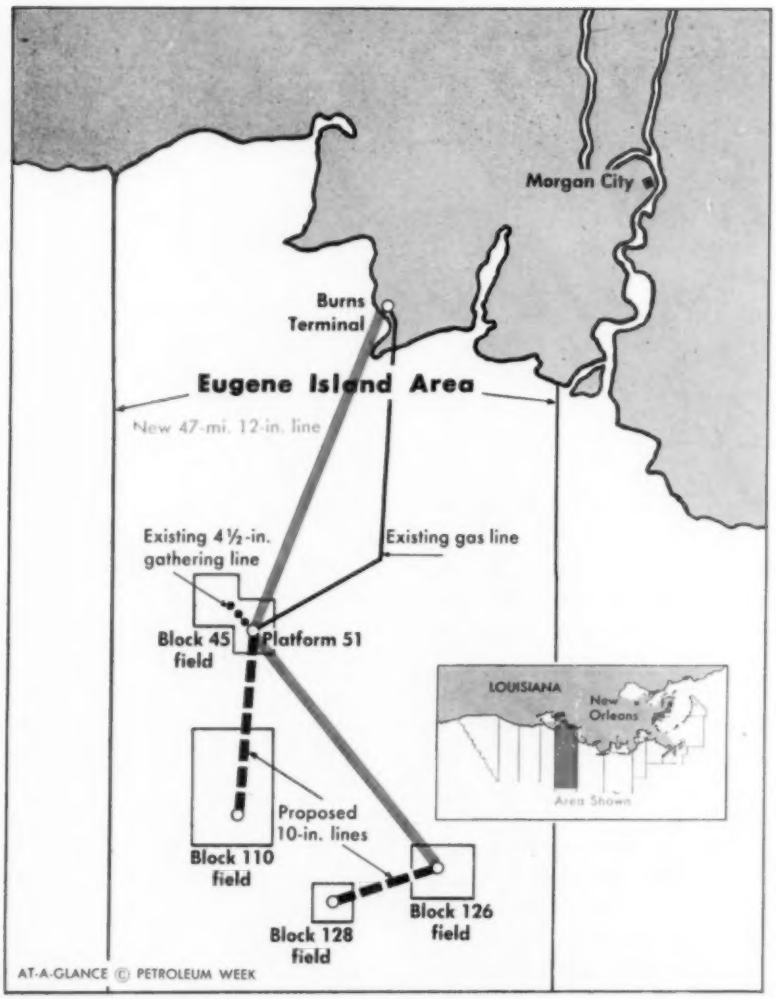
To make a great part of these successes possible required from petroleum sources the availability of large quantities of high purity benzene, toluene, and xylenes. These aromatics are now produced in exceptionally high purity and large amounts by the UOP Platforming process and are separated by the Udex process, this latter process developed cooperatively by Dow Chemical Company and Universal Oil Products Company and engineered and licensed by UOP. With these processes a ready supply of aromatics will always be assured.

Unheard of only a short time ago, these developments have become just the beginning for an unlimited future.

**UNIVERSAL OIL PRODUCTS COMPANY**

30 ALGONQUIN ROAD, DES PLAINES, ILLINOIS, U. S. A.

UOP *Universal Service Protects Your Investment*




*MCN's underwater line is a . . .*

# Pipeline for Oil and Gas

**One of the tough problems facing offshore oil operators—how to build a large, long underseas pipeline system to get oil and gas to shore—apparently has been solved by a group that now has such a system in action.**

The prompting motive for a pipeline was that it could provide more stable—and cheaper—transportation than barges, which are uncertain because of weather and often hard-pressed to handle sufficient volume.

The solution isn't a simple one, however, because installing and operating a pipeline system is a vexing, challenging problem itself.

**The new line was devised by the MCN Group for use off the coast of Louisiana.** It reaches offshore to gather production from the Eugene Island area in the Gulf of Mexico (map). The MCN Group—Magnolia Petroleum Co., Continental Oil Co. and Newmont Oil Co.—produce as a unit from the area. Magnolia Pipe Line Co. built the line.

Group production is centered in the Block 126 field, nearly 40 mi. south of the group's mainland base, Burns Terminal, in St. Mary Parish, La. From Block 126, a 12-in. line carries gas and oil from the field 21.9 mi. northwest to Platform 51, then north and slightly east 25.2 mi. to Burns Terminal. Mainline total is 47.1 mi. Altogether, there are 63.5 mi. of pipe in the system, including some 16.4 mi. of gathering line in addition to the main line.

Initial plans and estimates were made on the system in 1951; actual construction started a year ago. But, delayed by bad weather, it didn't finish until this past August.

**The system is unusual in two ways: It has the world's longest undersea pipeline; and it moves natural gas and crude oil through the same line.**

Gas and oil have been comingled in pipelines before, but never in a line of this size, or in a system that will connect several fields when extended. If the gas volume handled by the line becomes high enough to warrant it, Magnolia will lay another line for gas alone.

**The system came with an expensive price tag—$7-million, the group estimates. And nature did what it could to slow down and—for one long period—to stop the operation.**

The price tag includes the trunkline pipe in the system, plus the gathering line, plus the separator stations in Block 126 and at Burns Terminal. Magnolia figures it cost $75,000 a mi. to lay the pipe.

The weather was the big stopper in the pipe-laying. But a small, rock-boring clam, known as Lithophaga Bisulcata, also added complications. The clams bore into underwater limestone and siltstone reefs in the Gulf. Since the pipe was covered with concrete, it was fair game for the clams. But it was found that the clams didn't go below the ocean floor, so the contractor buried the line 3 ft. deep to preserve it.

Brown & Root, Inc., was the prime contractor for the pipeline. To plot the line, marker piles were driven every two miles in the shallow East Cote Blanche and Atchafalaya Bay areas, and buoys anchored every mile in deeper waters.

The pipe was prepared ashore for laying at sea. It was cleaned and primed, then covered with a coal-tar enamel, Fiberglas, and pipeline felt. A reinforcing wire mesh was placed around the pipe, and concrete applied to this until a 1½-in. thickness was built up. The pipe ends were left uncovered for future welding.

Pipe-laying started Sept. 24, 1954, with two barges, one working in the shallow water, the other in deep water. Each barge had five work stations—two for welding, and one each for x-raying and priming, doping and wrapping, and concrete jointing.

In the shallower bays, a dragline dug the ditch for the line, then backfilled it. In deeper water, the line was

laid, then ditched down with a jet-suction dredge.

To handle receiving and transmission in Block 126 field, Magnolia erected a four-platform separator station in the middle of the field during June and July of this year.

All the platforms are 78 ft. above the ocean floor, and 41 ft. above the water at low tide. All platforms are built to withstand hurricane winds of 125 mph.

**The Block 126 separator station is the heart of the system. It takes the gas and oil that flows in from the surrounding wells, separates the two if necessary, then moves them to the mainland, or stores them temporarily on the station.**

Some of the wells flow with high pressures—1,500-2,000 psi. Gas and oil from these wells can be fed directly into the pipeline, and moved by their own force to the mainland.

Wells with lower pressures haven't got enough "push." So the oil is separated from the gas, then both injected into the line at suitable pumping pressures to move them to the mainland.

Once the flow arrives at Burns Terminal, the gas is again separated from the oil. A crude line, expected to be finished a month from now, will take oil to the Intercoastal Canal, 8 mi. from Burns Terminal. From there, barges will move it to refineries at Beaumont and Lake Charles. United Gas Corp. takes the gas at Burns.

**Future plans call for the system to connect with two—and maybe more—other offshore fields in the area.**

At present, the MCN Group has an allowable of 196 b/d in the Block 110 field, about 11 mi. south of Platform 51. But the group is not producing from the field until a connecting pipeline is built.

The group is now starting to drill in Block 128 field, about 6 mi. west from Block 126. A gathering line will be extended to Block 128 when it's needed.

Present production of the group's Eugene Island fields is about 5,280 b/d from 28 wells. Block 45 has three wells producing an average of 750 b/d, and Block 126 has 25 wells flowing an average of 4,530 b/d.

Only four of the wells in the Block 126 field are flowing into the system right now: Their production is about 1,000 b/d. By Jan. 1, 1956, at least 16 others will be connected with the system, raising the daily flow through the line nearly 5,000 b/d.

Right now, the line is capable of handling 60,000 b/d of oil alone. If oil is comingled with gas, it can take care of 15,000 b/d of oil and 18-million cf/d of gas.

# What's New / IN TRANSPORTATION

## TGT to Boost Capacity

**Tennessee Gas Transmission Co. has been given the green light to build $56-million of natural gas pipelines to boost capacity by 107,610,000 cf/d.** The Federal Power Commission last week also approved applications of five independent producers to sell gas to Tennessee and gave authority to one new and two existing customers to build new pipeline facilities to connect with Tennessee's system.

Tennessee Gas will build about 220 mi. of main-line loops paralleling sections of its system in Kentucky and Ohio, as well as 376 mi. of new lines in Louisiana to connect up with its new gas supplies.

The addition will bring Tennessee's average-day capacity above 1.8-billion cf/d.

•

**Barge and highway haulers have succeeded in blocking a cut in petroleum rail rates in the Pacific Northwest.** A Federal Court panel ruled last week that an Interstate Commerce Commission order that would have cut rail rates 15% to 20% on bulk shipments would drive barge lines "out of business."

Columbia River barge operators were joined by 26 truck fleet operators in the successful bid to enjoin the ICC order. The railroads are expected to appeal.

•

**Several prominent oil groups and companies have joined in the campaign against the Hoover Commission's recommendation for user charges on inland waterways.** The National Waterways Conference, formed to stave off legislation expected to be introduced next year to put the recommendation into effect, released this week the list of conference members.

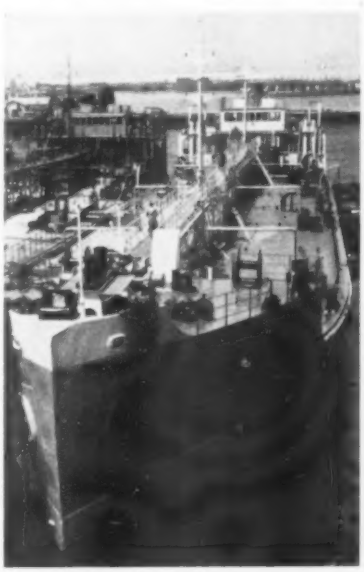
Included are Esso Standard Oil Co., Ashland Oil & Refining Co., Lake Tankers Corp., National Oil Transport Corp., Socony Mobil Oil Co., the American Petroleum Institute, and the Lake Carriers Assn. Oil companies are the second largest users of inland waterways.

•

**Construction of the first section of Westcoast Transmission Co.'s 30-in., $162-million pipeline from the Peace River field in Alberta to the U. S. border began this week.** Crews have begun clearing right-of-way in the Fraser Valley section for the 20-mi. section, from Huntington, B. C., on the U. S. border, to Rosedale, despite the fact that the U. S. Federal Power Commission has not yet approved application of Pacific Northwest Pipe Line Corp., to move the Canadian gas through the Pacific Northwest states.

•

**Work has begun on Salt Lake Pipe Line Corp.'s 82-mi., $2-million looping of its crude line from Rangely, Colo., to Salt Lake City.** Engineers, Ltd., San Francisco pipeline contractors, is general contractor. The 10-in. line parallels existing facilities in four major loops west from Red Wash field, Uintah County, Utah, to Wolf Creek Pass, in the Wasatch Mountains, immediately east of Salt Lake City. The looping, to be finished within 60 days, will increase volume of the line from 46,000 b/d to 55,000 b/d.



## Red China's First

**The first oil tanker ever built by Communist China has just been completed at the Dairen Shipbuilding Co. yards. The 3,700-ton vessel is shown above at Dairen before delivery to a transport company.**

# Bust in Stocks—but Business Still Booms

In Wall Street, Sept. 26, 1955, was a blue Monday—almost as gloomy as the Black Friday of 1929. Stock prices fell 6% in one day—more for some of the leaders—the worst beating in years. Oil stocks were off 2 to 8 points, among the hardest hit.

But in business, if you looked around, nothing was wrong. The industrial production index had just hit a new high. Department store sales were running way ahead of last year. Auto dealers reported the best September on record. In the oil industry, both drilling activity and the demand for refined products were at new peaks.

What was wrong—aside from the President's illness? As investment analysts were quick to point out, the illness is a sad fact. But it's not the sort of thing that affects business or the market directly. Earnings and dividends are still going to set new records this year—and probably next year again.

The answer is that stocks haven't been selling on the basis of present earnings—or even 1956 earnings. They've been selling on emotion, optimism, and a rosy-colored view of the distant future, beyond 1956. This made the market vulnerable to the first piece of bad news that came along—especially if it was news that made people wonder, "After 1956, what?"

* * * *

There's plenty of evidence that the market was due for a come-down even before President Eisenhower was stricken. Many stocks were selling at higher prices relative to earnings than at any time in recent years. The rate of return on quality common stock investments was getting down to the point where it was little above the return on bonds or preferred stocks, which are a lot safer. In the case of some leading companies, the return on the preferred stock was actually higher, and you could get almost as much on government bonds or savings deposits.

The market had been rising sharply all year—in fact ever since late 1952—and with an extra burst of speed in recent weeks. Markets seldom go up so fast for so long without coming down. And come down this one did—with a thud.

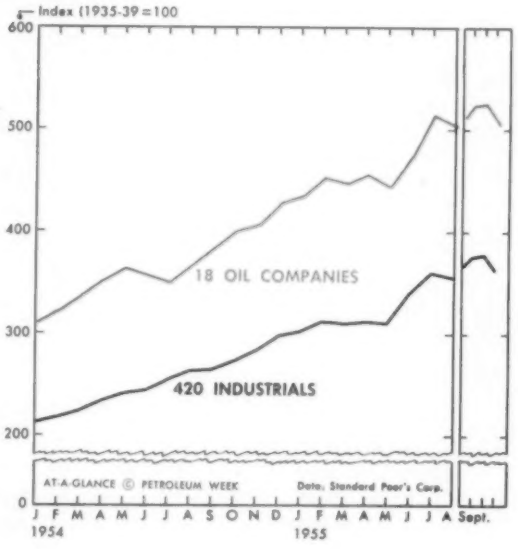
The day after the break, the market recovered sharply. Then it leveled off. From here on, it may go up again. Or it may go lower, depending on how sentiment changes.

But aside from sentiment and emotion—what is the real significance of the stock market break?

* * * *

From the viewpoint of the oil industry, there are several significant points to be noted:

• Recent prices for stocks—including oil stocks—are not likely to be sustained over the next year or two, unless this is a period of buoyant optimism. The break was a good indication of how much the prices of the great bulk of common stocks exceeded values based on earnings.




• Lower stock prices mean less favorable terms for new stock issues. Generally speaking, oil companies don't raise much money through new stock. But with big expansion under way, it might be handy to have stock market money available in 1956—especially since borrowing is getting much tougher. Stock market prices also affect the terms on which smaller firms can merge with or sell out to big ones. And stock options for executives obviously are worth less if the market is down.

• The stock market is usually a good index of business confidence. If it keeps sliding, you can figure that a lot of investors—most of them business men—are expecting political or economic trouble. If confidence fades, it's going to be harder to get money for risky ventures like oil well drilling.

• You can rule out inflation, if the stock market continues to drop. The market is an accurate thermometer for inflation fever. And oil stocks are inflation stocks. We've pointed this out before: General stock inflation would mean higher oil prices.

* * * *

Actually this is where the stock market players seem to have guessed wrong. The Democratic candidates for Mr. Eisenhower's job are all committed to federal programs that would be inflationary.

## To locate your friends

at the November **API Convention** in San Francisco

## **Telephone** McGraw-Hill Petroleum Publications'

Convention Registration **Information Center**

# GArfield 1-5841

- The Information Center operators will be able to tell you if the customer, prospect or friend you are looking for is registered and, if so, what hotel he is staying at and what his room number is. They also will be able to give you company-suite locations.
- Phone booths with direct lines to the Information Center will be located in the lobbies of the Sheraton Palace, St. Francis, Fairmont and Mark Hopkins.

***This service will be supplied courtesy of***

McGRAW-HILL
PETROLEUM PUBLICATIONS

| | |
|---|---|
| **Petroleum Week** | **National Petroleum News** |
| **Petroleum Processing** | **Platt's Oilgram News Service**<br>**Platt's Oilgram Price Services** |

*Australians ask:*

# Is There Such a Thing as a 1-Well Field?

**Australia's first oil strike—which touched off a wild oil rush in December, 1953, reminiscent of the first Texas oil boom—seems to have netted its company a somewhat elusive oil field.**

"We in Australia are too far removed from the established oil regions of the world to fully realize that an oil discovery does not always result in immediate riches," said Ampol Exploration, Ltd., in an official report to stockholders last week. Ampol owns 20% of the stock of Wapet (West Australian Petroleum Pty., Ltd.), which brought in the much publicized Rough Range No. 1. The U.S.-owned Caltex Oil (Australia) Pty., Ltd., owns the other 80%.

The original discovery well soon ran into difficulties and had to be abandoned for mechanical reasons. And seven other exploratory wells drilled subsequently on Rough Range proved dry. Finally the company drilled 30 ft. away from the original discovery, and completed No. 1A as a flowing well last June.

**This has raised important questions in the minds of both management and stockholders,** Ampol says. It puts it this way in its annual report:

"(1) Is this a one-well oil field?

"(2) Is No. 1A a commercial well?

"(3) Has anyone in the oil industry ever had so much hard luck in defining an oil field after making a discovery?"

The consensus of the best expert opinions in answer to these questions, Ampol adds, is as follows:

"(1) This might be a one-well oil field, but oil fields just do not happen that way.

"(2) No. 1A would be a satisfactory commercial well if it were close to market or if enough more wells like it can be completed to justify transportation facilities from this remote location.

"(3) As to the number of dry holes, this may come close to being a record, but similar failures have often preceded the development of important oil fields, especially where subsurface structural conditions are complex and obscure."

**The company has had little luck in its exploratory drilling in other parts of western Australia**—where it is actively exploring a total of 215,000 sq. mi. Wapet's total exploration expenditures up to the end of 1955 are expected to top $20,160,000, Ampol says. Next year's program, not yet finalized, will probably involve something like $7,840,000.

On the coastal area, Warroora No. 1 was completed in May at 5,992 ft. at a site 80 mi. south of Rough Range, without significant oil or gas shows. Three shallow core holes were drilled to about 1,500 ft. at Grierson, and a fourth is currently drilling at Cape Cuvier. Giralia No. 1 was drilled to 4,080 ft. this summer about 60 mi. southeast of Rough Range, again without achieving any significant oil or gas shows.

In the Kimberley area, Grant Range No. 1 is drilling below 11,800 ft. in shale and sandstone, with minor oil shows encountered.

On the 50-mi. long Cape Range structure, No. 1 well was drilled to 8,014 ft. last December and left for deepening later with heavier equipment if developments warrant. Cape Range No. 2 was started Apr. 20 and is now drilling below 10,400 ft., slowed by increasing amounts of high-pressure gas.

# U.S. Unit Sets Suez Gulf Hunt

**Southern California Petroleum Corp., operating for International Egyptian Oil Co., is planning to carry exploration of its Belayim field into the Gulf of Suez** in the next six to twelve months. Equipment ordered from Eastman Oil Well Survey Co., of Denver, is expected to reach Egypt's Sinai Peninsula this month.

Immediate plans call for directional drilling from the Sinai shore, according to Robert Fei, Southern California's field superintendent. Offshore platform drilling may be undertaken in the distant future if conditions require it.

Eight permits have been requested from the Egyptian government, to cover the search in Suez waters. Marine seismic surveys completed this summer by Geomarine Seismic International indicate, Fei says, that most of International Egyptian's Belayim field lies in the Gulf of Suez.

**Meanwhile, Tyler F. Woodward, Southern California's president, revealed that the gravities of oil at the Belayim field range from 16 degrees to 24 degrees.** He told PETROLEUM WEEK that No. 2 well is producing 16-gravity oil. No. 5 and No. 6 wells are 23-plus-gravity crude.

The Nos. 5 and 6 wells are producing from the 5,100 ft. zone and are allowed to flow at a rate between 200 b/d and 300 b/d.

The recently completed No. 2 well (PW—Sep.23'55,p29), Woodward reported, was perforated at 8,580-660 ft. and was initially gauged at a rate of approximately 200 bbl. per hour on open flow. After cleaning itself, the well was flowed 36-hr. through ¾-in. choke for a yield of approximately 125 bbl per hr. Because of lack of storage, the flow was further choked to ½-in., and production was 2,160 b/d for several days.

The storage problem will be relieved with completion of an 8-in. line between the Belayim field and the Feiran marine terminal, about 8 mi. north.

At International Egyptian's Feiran field, Feiran No. 4 well is producing 27-gravity oil, Woodward said. The No. 5 well, now being completed, he added, will produce 27- or 28-gravity crude, "because it is approximately 245 ft. higher than Feiran No. 4."

International Egyptian is internationally owned. Major shares are held by Belgian, Italian, and Swiss groups. Southern Californian, which is a minority holder, serves as operator and drilling contractor.

Geological prospectors investigate a possible oil structure in the Tsaidam Basin in northwest China, where a 3,860-sq. mi. area is being studied this year. The basin lies at an average of nearly 10,000 ft. above sea level between mountain ranges.

# Women Join Oil Hunt in Red China

Women prospectors appear to form a large part of the geological survey team now studying Tsaidam Basin oil resources. The officially released photo shows them looking pleased over their tent home—complete with colored pillows and alarm clock.

Geologists inspect outcroppings in the Tsaidam Basin area of Chinghsi Province. The basin covers a total area of 115,800 sq. mi. The Chinese claim it holds many potentially rich structures. Oil search was started in the basin last year.

# What's New / ABROAD

## U. S. Setback in Brazil

**BRAZIL—U. S. oil companies hopeful of getting a foot into development of Brazil's oil resources can expect tougher sledding.** The reason: rejection by Argentina's revolutionary government of Peron's contract with Standard Oil Co. of California (PW—Sep.30'55,p22).

"Cancellation of the Socal oil contract in Argentina is a big setback for U. S. oil interests in Brazil," says Henry Wilson, Esso vice-president. Other U. S. oilmen in Brazil agree. "This might put us right back where we started—still thousands of miles away from Brazil's oil," says one.

U. S. oil companies had counted on the Argentine contract as an example for negotiating a wedge into Brazil's government monopoly of oil development. For years, Brazil's hotly nationalistic elements have been proclaiming, "Petroleum is ours." Opposing groups have been pressing the need for foreign private capital to get Brazil's oil out of the ground. Annual oil imports, which have run at about $225-million a year for the past three years, have been an important drain on Brazil's foreign exchange, now critically short.

The editor of one Brazilian newspaper said he had planned editorials asking: "If the nationalist dictator Peron saw the light and invited foreign companies to develop Argentina's oil resources, why doesn't Brazil?" But the revolt in Argentina has changed the picture. Nationalist groups are now adding another string to their bow: "Look what that crook Peron tried to do with Yankees to fill his pockets and theirs."

•

## To End U. S. Imports

**MEXICO—Imports of petroleum products from the U. S. will be discontinued by mid-1956, Antonio J. Bermudez said last week.**

The director general of Petroleos Mexicanos, government oil monpoly, announced that Mexico would be able to start reducing imports—now running more than $60-million annually—early next year (PW—Sep.2'55,p26).

Main elements in the reduction of imports, Bermudez indicated, are the newly expanded Minatitlan refinery and the 311-mi. Tampico-Monterrey pipeline. Products will be piped from Minatitlan through an existing pipeline to Salina Cruz on the Pacific Coast; tankers will carry the products to west coast cities from there. Completion of the Tampico-Monterrey line, still scheduled for November completion despite hurricanes that have lashed the northeastern coast, will help supply the north central areas of Mexico.

Thus far it has been more economical for Pemex to import products for northern areas of Mexico because of transport difficulties. But imports have meant a serious drain on Pemex operations. The government fixes domestic prices at a uniformly low level, and Pemex has had to sell its imported products frequently at less than half their cost.

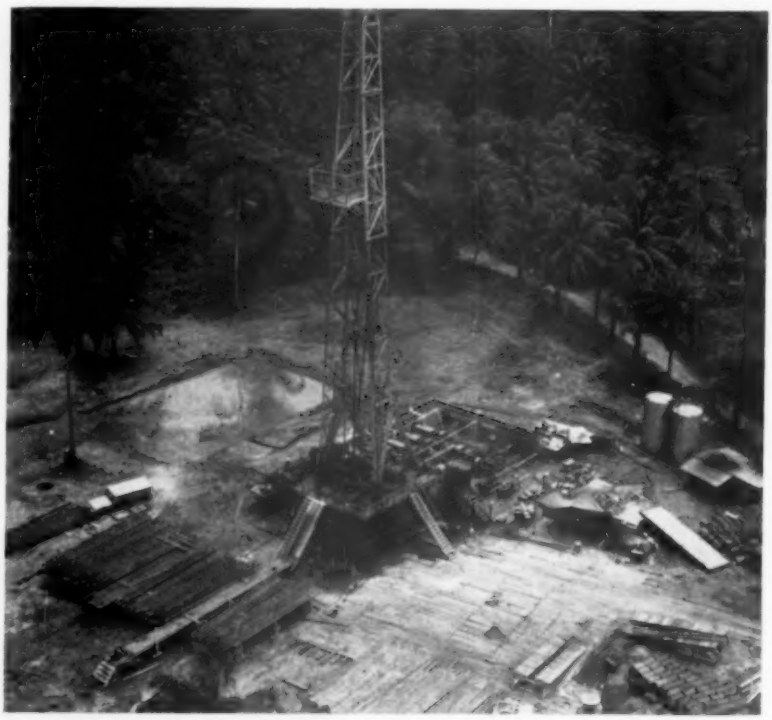
•

## Gulf Does It Again?

**ITALY—A Gulf Oil affiliate and the government-owned oil company last week were each reported to have racked up additional oil finds in the Abruzzi region** (PW—Sep.23'55,p29). The two new strikes further raise hopes in Italy of the existence of an extensive oil field in the area east of Rome and inland from the Adriatic Sea.

Petrosud, owned jointly by Gulf and Montecatini, reportedly found a second oil-bearing stratum at 7,544 ft. in its Cygno No. 2 well. The well had hit its first oil stratum last spring at 2,604 ft. Gulf, however, has refused comment on early reports.

Meanwhile, Premier Antonio Segni announced that Ente Nazionale Idrocarburi has made its second strike



## U.S. Firm's Subsidiary Drills in Nigeria

**A new wildcat has been spudded in Nigeria, on Africa's west coast, by the Dutch subsidiary of Drilling & Exploration Co., of Los Angeles, for Shell D'Arcy Petroleum Development Co. of Nigeria, a jointly owned subsidiary of Shell and British Petroleum. This latest of a series of appraisal wells drilled for the company is located at Umuna, Owerri Province. Completion is expected in about three months. Shell-D'Arcy has covered 58,000 sq. mi. of the British protectorate in an extensive exploratory program; to date it has drilled a total of almost 15 mi. of hole in Nigeria without discovering any commercial quantities of oil.**

within a month in a wildcat at Cerin. The well is about 37 mi. from the town of Vasto, near the Adriatic, and was completed at about 9,840 ft. ENI's first strike, at Vallecupa, was made at a depth of 1,600 ft.

Petrosud's Cygno No. 2, as well as ENI's wildcats at Cerin and Vallecupa, are within about 2 mi. of Cygno No. 1, where Petrosud brought in Italy's first and much-publicized oil strike on the mainland. That well was shut down pending revision of Italy's widely debated oil law.

•

## Equipment Orders Up

**UNITED KINGDOM—Orders received by British firms for oil equipment and materials in the first half of this year increased more than 50% in value over the first six months of 1954.** Value was $176.4-million, the highest figure ever recorded for a six-month period, and an increase of $61.6-million over the same period last year. A high proportion of the orders is for overseas use. These figures, compiled by the Oil Companies Materials Secretariat, were issued by the Council of British Manufacturers of Petroleum Equipment. They do not include orders placed for oil tankers, which at present account for half of all merchant tonnage under construction in U. K. yards.

The total covers a wide range of equipment. The principal categories, with the half-year values, are: tubular goods, pipefittings, and valves, $24.5-million; specialized drilling and production equipment, $16.7-million; specialized equipment for oil refineries, $10.1-million; electrical equipment, $9.7-million; and drums, drumsheets, and tinplate, $13.8-million.

•

**ISRAEL—There's a new push behind oil exploration in Israel since announcement of the country's first oil strike** (PW—Sep.30'55,p11). David C. Bintliff, of Houston, has announced he will spud in a wildcat shortly about 30 mi. south of the recent Huleiqat strike. Site of the well will be in the center of Bintliff's 45,000-acre concession block in the Halutsa area, where geological work has been going on for a year. Bintliff expects to hit oil in the same horizon as Lapidot-Israel Petroleum Corp.'s strike, but is prepared to drill to 9,000 ft. to test other sands.

Meanwhile Lapidot-Israel's affiliate, American-Israel Corp. (AMPAL), confirmed this week that the company will increase depth of the Huleiqat well rather than start immediate production from the 4,906-ft. depth at which it found oil. The well will be carried several hundred feet deeper in the hope of reaching other pay sand.

According to a preliminary survey made by the company, the Huleiqat anticline is 60-70 mi. long, 6-7 mi. wide, with a 6-ft. sandstone "roof."

•

**COLOMBIA—Crude oil exports dropped in the first half of 1955** to 12.3-million bbl. from 16.4-million bbl. in the same period last year, due to full operation of the newly expanded Barrancabermeja refinery. At the same time, refined products produced in Colombia rose from 5.9-million bbl. in the first half of 1954 to 7.1-million bbl. this year.

Drilling activity increased substantially this year, with 60 new wells spudded, against 46 in the first half of 1954. Crude output, however, dropped to 19.2-million bbl. from 20.6-million bbl. in 1954.

•

**MEXICO — Petroleos Mexicanos will buy 20 new drilling rigs for its 1956 drilling program,** director Antonio J. Bermudez announced last week. Next year's schedule calls for drilling 750 new wells (PW—Jul.29 '55,p29), and observers were originally skeptical of Pemex' ability to finance the program, which is double this year's goal. However, it's believed that the recently signed gas-sale contract with Texas Eastern Transmission Corp. (page 12) has substantially improved Pemex' credit position. Pemex currently has 125 rigs in operation.

•

**FRANCE—Esso Standard S. A. F. has completed another well in the Parentis-Mothes area, abandoned two dry holes, and spudded in two new wildcats.**

The company announced completion of Parentis 15 on the south shore of the Lake of Biscarosse at a depth of 7,895 ft. The well has been acidized, and tested at the rate of 1,793 b/d on 11/32 in. choke. Parentis 16 was spudded in on Sept. 7, northwest of Parentis 15, on the shore of the lake. It is being drilled directionally and is currently below 3,750 ft. Parentis 11, the offshore wildcat in the lake, is drilling below 7,545 ft. after having encountered oil shows at 6,714 ft. (PW—Sep.23'55,p29).

In the Mothes field, Saugnac wildcat was abandoned at a depth of 9,816 ft. in mid-September. The Saint-Martin-du-Bois well was abandoned at 7,087 ft., and the rig was moved to Saint-Paul-en-Born, 7½ mi. south of Parentis, where a new wildcat was spudded. Halfway between the Parentis and Mothes fields, Ychoux wildcat is currently drilling below 5,353 ft.

•

**SYRIA—Talks have been resumed between the new government and the internationally owned Iraq Petroleum Co. over revision of pipeline transit fees** (PW—Sep.23'55,p26). G. H. Herridge, chairman of the IPC board of directors, and Suleiman Mudarris, IPC representative in Syria, are negotiating for the company. Representing the Syrian government are National Economy Minister Rizkallah Antaki and the Ministers of Public Works and Finance.

•

**FRENCH MOROCCO — Petromines, a new French petroleum combine, has been granted oil exploration permits covering 46,930 acres in the valley of Oued Beth,** about 18 mi. south of a recent oil strike made by the Societe Cherifienne des Petroles. To date, the latter company has been the sole operator in the French territory in northwest Africa.

•

**KUWAIT—Crude oil output in August was cut 10% from the month before and 16% below the record set earlier this year.** The August rate was 1,043,296 b/d as against 1,151,694 b/d in July, according to Kuwait Oil Co., Ltd., which is owned jointly by Gulf Oil Corp. and British Petroleum Co., Ltd. The August output was 31,947 b/d higher than August, 1954.

•

**QATAR—Crude oil flow in August hovered close to the previous month's level, but was 18% above a year ago.** Total production, according to Qatar Petroleum Co., was 458,552 tons, or roughly 113,898 b/d, as compared with 114,157 b/d in July and 95,858 b/d in August, 1954.

•

**IRAQ—Crude oil production increased 11% in August,** according to Iraq Petroleum Co. Output averaged approximately 703,702 b/d (2,908,634 tons) for the month, up from 636,678 b/d (2,631,605 tons) in July. Production for the first eight months averaged 662,386 b/d (21,372,980 tons).

# ODM Sets New Refinery Goal

**The era of fast tax writeoffs appears to be about over for the oil industry, despite the government announcement last week of an increase in the expansion goals for refining, alkylation, and certain pipeline and storage projects.**

At first glance, it would appear refiners got a break when the Office of Defense Mobilization increased the old basic refining-capacity goal of 8¾-million b/d to 9-million b/d—thus opening 250,000 b/d to new applications for fast tax writeoffs. Also, ODM increased the alkylation goal by 25,000 b/d.

Other oil goals were closed, although a special exemption was made for oil storage requested by the military and pipelines to military bases. An opening was left, too, for approval of fast tax writeoffs on an East Coast or West Coast crude or products line.

**One big stumbling block for refiners could be a decision by ODM to enforce the seldom-applied dispersal rule,** under which no fast-writeoff approval would be given if a project falls within a wartime target area.

ODM is charged with the responsibility of keeping vital industries from getting too close together, where a well-placed bomb could destroy several of them at once. As yet, however, the agency hasn't been able to figure a rule-of-thumb which could be used to decide which projects meet the dispersal rules and which don't.

The dispersal problem was greatly magnified by the advent of the hydrogen bomb. This posed the question: Can you disperse far enough to get out of H-bomb range?

Any strong enforcement of the dispersal rule would knock out most applications for refinery expansion, because it's obvious that major refining areas would fall within target-area designations.

**Another deterrent, even if the dispersal rule is not enforced, is that ODM already has on hand almost enough applications to meet the new goal.**

Earlier this year, when expansion neared the old goal, the interior Dept.'s Office of Oil & Gas began holding up new applications until it could get ODM approval for a new expansion target. Then ODM applied the "freeze" to virtually all expansion programs, and the refining program was further delayed. Meanwhile, applications still came in.

**The net effect is that most refiners are apt to ignore fast tax writeoffs entirely and proceed with their expansion programs without them.**

There has been considerable debate over just how much expansion can be attributed to the stimulus of the fast tax writeoff program. There is little doubt, nevertheless, that the plan has helped some arrange financing, because, by having larger tax deductions for five years, a company is in a better position to make larger payments on its debts.

Most major companies, however, have not faced such financing difficulties. Therefore, their expansion was not dependent on whether or not they received fast tax writeoff benefits. They used the benefits because they were available, but it's quite likely most of these companies would have expanded anyway.

**There are strong indications that refining expansion has gained enough momentum to reach the government's goal regardless of the future of fast tax writeoffs.** Qualified observers give this rundown on the current status:

- The Bureau of Mines annual statistics on refining show there were 8,069,154 b/d of capacity in operation Jan. 1, 1955. Private estimates indicate about 50,000 b/d have gone on stream since that time.
- In addition, about 230,000 b/d in new crude-charging capacity and another 100,000 b/d in expanded crude-charging capacity at old refineries are scheduled for completion by Jan. 1, 1957—the government's target date. This would bring the operating capacity close to 8½-million b/d.

There is also an estimated 351,000 b/d of shut-in capacity, which would bring the gross total to 8.8-million b/d.

If the above calculations are correct, the industry would need only an additional 200,000 b/d to reach the 9,000,000 b/d goal.

**Alkylation is the only field in which refiners still have a clear field ahead for fast tax writeoffs.** The dispersal rule does not apply, and the writeoff rate will be continued at 100%, so the entire cost of new alkylation facilities may be written off for tax purposes in five years. The only drawback here is that refiners have generally found that alkylation units don't pay their own way except during wartime, when the military's demand for aviation gasoline is great.

**There may be a surprising number of opportunities for fast tax writeoffs on pipeline and storage projects,** even though such tax benefits will be limited to those sought by the military.

The armed forces are giving more and more consideration to supplying their installations—specifically their air bases—by pipeline rather than by rail or tank truck. As a result, they may soon be asking the industry to build these lines. Such construction would be entitled to rapid tax writeoffs, and the percentage probably will be 65% for storage and 40% for pipelines, instead of the 40% and 25% which has been granted in the past for ordinary storage and pipeline facilities.

The government has announced no goal yet for these military-requested pipelines and storage plants.

## Hawaii Refinery To Be 'Smog-Proof'

**Standard Oil Co. of California proposes to build a 25,000 b/d refinery at Honolulu that will produce "no smog, no pollution, and no odors."** The company's offer was made to the Honolulu City Planning Commission last week in a plea for a change in zoning to permit construction of a $30-million refinery on Sand Island, at the entrance to Honolulu harbor.

The planned refinery is opposed by the Honolulu Parks Board and by a local civic group that would prefer development of the island as a beach park. The island, however, is controlled by the U.S. government, which has agreed to release the land only if is used for a refinery. If the zoning change is approved, sale of the 108-acres would be subject to public bid.

Socal's refinery plans call for a two-stage crude distillation unit, a 10,000 b/d fluid catalytic cracker, and a 1,000 b/d alkylation plant. One antipollution unit is a hydrogen sulfide recovery unit, to prevent odors from escaping from refinery fuel gas. Other antipollution measures to be used in the refinery include: A closed system is provided throughout so that vapors released through safety valves will be gathered and returned to the refinery fuel system; flue gas from the cat cracker will be completely incinerated; electrostatic precipitators will remove escaping catalyst dust from flue stacks; storage tanks will be provided with floating roofs to prevent evaporation; mechanical seals will be used on all pumps to prevent vapor loss; and separators will be used to remove contaminants from all liquid waste before discharge into the ocean.

# What's New / IN REFINING

## Rubber Expansion Set

**The synthetic rubber capacity of two of the nations largest rubber companies is going to be expanded considerably.** This expansion by Goodyear Tire & Rubber Co. and Firestone Tire & Rubber Co. is to meet part of the increased requirements of this petroleum-derived raw material expected over the next few years (PW—Sep.9'55,p9).

Goodycar's synthetic rubber expansion is part of the company's $100-million improvement program. The company plans a total expenditure of $6-million for expansion of synthetic rubber plants at Houston and Akron. Most of it will go to Houston, where major new construction is planned; only equipment changes are scheduled for Akron.

Goodyear will also invest $3.5-million in a capacity increase at its Chemigum and resin plants at Akron for the production of nitrile rubbers and latexes to fill the increased demand for these raw materials by the rubber, textile, paint, and paper industries.

Firestone is increasing its synthetic rubber capacity to more than 190,000 tons annually, with expansion of existing facilities plus construction of a new butadiene plant.

Catalytic Construction Co. was awarded a contract for the design and construction of a 40,000-tons-a-year butadiene plant. While the company did not announce the location of the new plant, it is understood to be planned for the Lake Charles (La.) area where Firestone has a synthetic rubber plant formerly owned by the government.

Firestone also announced that it will expand the capacity of its Akron synthetic rubber plant by 35% and its Lake Charles plant by 50%.

•

**Standard Oil Co. (Ind.) is contemplating rebuilding or replacing the 30,000 b/d Orthoformer that was damaged in the fire at the Whiting refinery at the end of August. But this won't be done, however, until the company has completely evaluated the alternate possibilities.**

Meanwhile, the company is proceeding with its previously announced plans to start immediate construction of a 14,000 b/d Ultraformer, which originally was not scheduled for construction until 1957 (PW—Sep.16'55, p21). This unit will duplicate a cat reformer now being built at the company's Sugar Creek (Mo.) refinery.

•

**A program to expand petroleum-derived glycerine capacity by 70-million lb. annually by June 30, 1957, was approved last week by the Office of Defense Mobilization.** Existing capacity includes facilities for 140-million lb. of natural and 115-million lb. of propylene-derived glycerine annually. Applications for fast tax write-off certificates under the expansion program must be submitted by next June 30.

•

**Phillips Petroleum Co. will expand the capacity of the lube plant at its Kansas City (Kan.) refinery by 20%, to about 2,400 b/d.** Construction will start in the near future and completion is scheduled for the fall of 1956. The lube plant at the 55,000 b/d refinery was built in 1949, and the plant's capacity was later expanded by one-third. Lube oil shipments are made from this plant to all points in the company's marketing area.

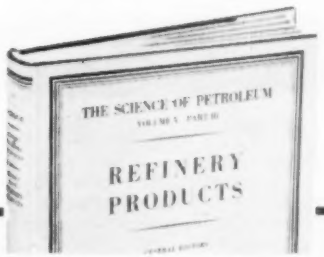
•

**Northwestern Refining Co. plans to increase its use of Canadian crude oil at its 8,000 b/d St. Paul Park (Minn.) refinery.** The company started initial runs of Saskatchewan crude last week; it has contracted with Shell Oil Co. to supply 3,000 b/d. The Shell Canadian crude is being transported by rail tank cars, but Northwestern plans to take crude from other Canadian suppliers through its new connection with the Minnesota Pipe Line system.

•

**Richmond Exploration Co. will start construction immediately on a 10,000 b/d asphalt refinery at Maracaibo, Venezuela.** The plant, which will cost $4-million, is scheduled for completion next August. It is the first Venezuelan refinery for this crude oil producing company, a subsidiary of Standard Oil Co. of California. The bulk of the asphalt will be marketed by another Socal subsidiary, American Bitumuls & Asphalt Co.


**JUST PUBLISHED!**




***THE Science of Petroleum***

VOLUME V • PART III

**REFINERY PRODUCTS**

**Edited by B. T. BROOKS and A. E. DUNSTAN.** Twenty-three separate papers, each fully illustrated and with a comprehensive bibliography, detail the latest advances in the field of refinery products in this 406-page volume. The articles, each written by an American or British petroleum technologist, include:

**Manufacture and Testing of Aviation Gasolines** *by* W. A. PARTRIDGE

**Boundary Lubrication** *by* D. TABOR *and* F. P. BOWDEN

**Paraffin Wax** *by* S .W. FERRIS

**Analytical and Testing Methods** *by* W. H. THOMAS

**Engine Testing of Lubricating Oils** *by* W. B. BASSETT

**Gas Turbine Fuels** *by* C. G. WILLIAMS, H. ROWLING *and* J. G. SHARP

**Raman Spectroscopy in the Petroleum Industry** *by* R. R. GORDON

Recent additional and supplementary volumes in **THE SCIENCE OF PETROLEUM series:**

Volume VI, Part I
**The World's Oilfields**
*The Eastern Hemisphere*
*Edited by Professor* V. C. ILLING

Volume V, Part II
**Synthetic Products and Refinery Processes**
General Editors: B. T. Brooks and A. E. DUNSTAN
*Earlier Volumes:*

**The Science of Petroleum, Vols. I-IV**
Volume V, Part I
Crude Oils: *Chemical and Physical Properties*

**To obtain *Refinery Products*, return the coupon below.**

**OXFORD UNIVERSITY PRESS, Inc.**
114 Fifth Avenue, New York 11, N. Y.
☐ Enclosed is check, money order for $32.50. Please send *The Science of Petroleum, Volume V, Part III.*

**Name**.....
**Address**.....
**City**..... **Zone**..... **State**.....

| CITY | PROTESTED PRICE (Dealer t/w, net) | INVESTIGATING BODY | COMPLAINT |
|---|---|---|---|
| Boston, Mass. | 12.9¢<br>15.6¢ | U. S. grand jury<br>State legislature | too low (in price wars)<br>too high (after price wars) |
| Butte, Mont. | 19.9¢ | State legislature | too high<br>too uniform |
| Detroit, Mich. | 17.3¢ | State legislature<br>State attorney general | too high<br>too uniform |
| Elizabeth, N. J. | 12.0¢ | State attorney general<br>State legislature<br>U. S. small business subcommittee | too tricky (rebates)<br>too low<br>too low |
| Richmond, Va. | 13.5¢ | U. S. small business subcommittee | too low |
| San Diego, Calif. | 11.7¢ | U. S. small business subcommittee | too low<br>too many "giveaways" |
| Seattle, Wash. | 17.3¢ | State legislature | too "high-handed" |

AT-A-GLANCE © PETROLEUM WEEK

THIS RUNDOWN of gasoline price complaints from around the country shows why . . .

# Suppliers Just Can't Win

**The way things have been going recently, gasoline suppliers would be justified in wondering if they can possibly do anything right on the matter of pricing. In some places they're hit with charges that their prices are too high; in others, too low; in still others, too uniform** (table above).

A survey of the gasoline market shows little consistency in the complaints. And the protests come from a wide variety of sources, including some within the oil industry.

**Jobbers and dealers have been among the most vociferous critics of gasoline "bargains."**

Next month's annual meeting of the National Oil Jobbers Council (PW—Sep.23'55,p36) is sure to produce some fiery statements about suppliers who have underbid jobbers for commercial accounts.

And right now gasoline retailers in California, Colorado, Minnesota, and Rhode Island are pitted in new price wars.

Jobbers complain that suppliers who undersell the distributors and deal directly with commercial consumers are "pirating" business that took the distributors years to develop. Dealers, in general, are denouncing both the old and the new price wars.

Despite the cushion of lowered tankwagon prices and/or "competitive allowances," dealers usually do share, with suppliers, the reduced profits inevitable in a price war. And whether they are badly hurt by the war or not, the dealers usually resent the friction created in their local markets.

**Probers, too, are tending to condemn the cut-rate sales, particularly the suppliers reduced wholesale prices that go with them.**

Rep. James Roosevelt (D., Calif.), chairman of the House Small Business subcommittee, has summed up the opposition to low prices from an antitrust angle. The committee has held hearings in Washington, D. C. and in California. New hearings are scheduled to be held in Virginia this month.

Roosevelt says he has found that a major oil company, when threatened with loss of gallonage by such a source as an off-brand dealer, "isolates" the offending dealer and underprices him out of the market.

This view of major suppliers has been expressed, also, as a preliminary to the federal grand jury investigation of alleged "price-fixing" in Boston in the course of recent price wars there. Major suppliers were issued subpoenas last week.

The same view has been expressed in New Jersey. The legislature is considering establishment of a "floor" for gasoline prices, and the attorney general's office has started to prosecute 12 majors for allegedly giving illegal "rebates" during price wars.

**Complaints that suppliers have been charging too much for gasoline, on the other hand, have been voiced recently in at least three states.**

The Michigan legislature is under pressure to reconsider a proposal rejected last May by only two votes—a proposal that gasoline prices be controlled by the state. Both dealers and jobbers in the states have pointed to the tank wagon price as the offending element in a high-price picture (PW—Sep.23'55,p12). The state attorney general's office, too, has been weighing supplier price practices in Michigan.

The attorney general in Montana is surveying the gasoline price situation in that state. And in Massachusetts the legislature has been asked to investigate the tank wagon price increases that have followed the price wars.

**And whether prices are up or down, there are public officials who find them "too uniform"—both locally and in general.**

The legislatures of Washington and Montana, in addition to those in Massachusetts, Michigan, and New Jersey, have been eyeing supplier price policies for possible proof that major suppliers act in concert, whether in price war or peace periods.

The U. S. Justice Dept. has furnished the national arena in which the alleged uniformity of gasoline pricing has been debated. At one time, in fact, the department was reported trying to link all majors into a wholesale antitrust action. The Justice Dept's. thesis is that each major is alloted a territory in which that particular company sets the price pace, and all others follow. In turn, that company supposedly plays follow the leader in the "territories" of other majors.

Rep. Roosevelt has come close to this accusation, too. He says the major supplier (he makes no distinction between companies) takes no economic risks in the struggle to maintain or expand markets. Major suppliers, according to Roosevelt, soak motorists in "peace" areas to make up for losses in price-war areas. The practice, he implies, results in uniform fluctuations, the ups and downs being dependent only upon the number and nature of disturbances being steamrollered by the majors.

**Suppliers, though, insist they have individual price policies—determined by competitive principles. And they insist, too, that they can maintain the most equitable price system without government interference.**

The field of jobber relations is the thorniest. No oil company has been able yet to figure out how competition for commercial accounts can be

placed at a level high enough to give jobbers a profit consistently—at least, not without bumping into antitrust stickers.

And in the field of dealer relations, several companies have reemphasized or revised their lease policies and their tire, battery, and accessory contracts, and have strengthened their efforts to make successful businessmen out of their dealers. But price wars, they feel, are inevitable in a truly competitive economy.

Suppliers, furthermore, can cite statistics in almost any area to show a price spread among the postings of many majors, whether in the high-transportation, high-tax territories or in the stiffest price-war areas.

And as for the constant threat of government control, B. Brewster Jennings, board chairman of Socony Mobil Oil Co., has summed up the attitude of his colleagues. He pointed out (PW—Sep.23'55,p37) that government, whether local or federal, can fix prices in only three possible ways: higher, lower, or identical to those established by private competition.

The first, he said, would give oil companies an unwanted subsidy, the second would lead to black markets, and the third would be a waste of the taxpayers' money.

# What's New / IN MARKETING

## Amoco Moves into Texas

**American Oil Co. has decided to enter the Texas market—after 21 years of manufacturing its products in that state strictly for eastern consumers.** Amoco, which features "the only unleaded premium gasoline in the country," is starting with a bulk plant and service station near its Texas City refinery. Other outlets will be considered later next year.

Motor oil and lubes have been sold in Texas under the company banner since 1952. But Amoco gasolines have been unavailable there. The change in policy follows a company reorganization in the past year, and the building of a new refinery in Virginia to help cover the company's existing market from Maine to Florida (PW—Aug.26 '55,p17).

•

**Congressional action to divorce oil companies from retail operations is considered "unlikely"** by Donald C. O'Hara, associate counsel of the National Petroleum Assn.

O'Hara told Ohio jobbers last week that divorcement proposals have been "made in anger" and are almost sure to be discounted. They could only lead, he said, to creation of large marketing companies and would result in no real advantage for the dealer without some capital.

•

**The average octane rating of gasoline at service stations climbed to a new high last month,** Ethyl Corp. reports in its latest monthly survey of 53 cities.

The nationwide weighted average reached 96 for premium and 88.8 for regular, which represent increases of 0.1 and 0.3, respectively, over the August average. The gain since September, 1954, is 2 octane numbers in the premium rating and 1.8 in the regular.


**ENGINEERS**

*Chemical and Oil Refining*

Furnace Builder requires engineers with experience in design and operation of processing heaters used in petroleum and chemical industries — location New York. Salary, incentive plan and excellent working conditions.

**P-7834—PETROLEUM WEEK**
**330 W. 42nd St., New York 36, N. Y.**



***LOOKING FOR***

**PREMIUMS GIFTS PRIZES**

**Just off the press—the biggest catalog of its kind!** Over 900 pages jam-packed with thousands on thousands of widely diversified and nationally known items to help you fill your gift requirements. Jewelry, sporting goods, toys, appliances, cameras and general merchandise—quality products in virtually every price category. Six floors of top-line merchandise in our own newly modernized building. Celebrating our 45th year as direct factory distributors.

*Free!*

**900-PAGE CATALOG**

PLUS GIFT SUGGESTION LIST. Send today on your letterhead for free giant catalog and Prize Suggestion Folder—really helpful guides to "giving" problems. Write Dept. 10C.

**JOSEPH HAGN CO.**

**325 W. MADISON • CHICAGO 6, ILL.**

# The Market Place AROUND THE WORLD

Current key crude and refined oil prices compiled for PETROLEUM WEEK by Platt's OILGRAM Price Service, a McGraw-Hill Publication.

All Prices as of October 3

Bold face type indicates changes from previous week

## KEY PRICES—REFINED PRODUCTS

(¢ per gal., except dollars per bbl. where $ is shown)

### Western Hemisphere

**U. S. Gulf Coast, cargoes**
- Gasoline, 97 oct prem....13-13.5
- Gasoline, 90 oct reg....11-11.5
- Kerosine....8.75-9.75
- Heating oil, No. 2....8.5-9.25
- Gas oil, 48-52 d.i....8.625-9.125
- Fuel oil, bunker "C"....$2.10-2.15

**Caribbean, cargoes**
- Avgas, Grade 100/130....16.75
- Gasoline, 93 oct research prem....11.5
- Gasoline, 87 oct research reg....10.5
- Gasoline, 79 oct research....9.75
- Gasoline, 70-72 oct motor method....9.5
- Kerosine....8.75
- Heating oil, No. 2....8.5
- Gas oil, 48-52 d.i....8.625
- Fuel oil, bunker "C"....$2.10

**New York Harbor, barges**
- Gasoline, 89 oct reg....12.25
- Kerosine....10.55
- Heating oil, No. 2....10.05
- Fuel oil, No. 6....$2.65

**Okla.-Group 3, northern shpt, bulk**
- Gasoline, 86 oct reg....11-11.5
- Kerosine....9.25-9.5
- Heating oil, No. 2....8-8.5
- Fuel oil, No. 6....$1.75-1.90

**Chicago, bulk**
- Gasoline, 86 oct reg....12
- **Heating oil, No. 2....9.25-10.1**
- Fuel oil, No. 6, high sulfur....7.15-7.35

**Los Angeles, rack**
- Gasoline, 84 oct reg....13.-13.15
- Stove dist., PS 100....9.25-10
- Diesel fuel, PS 200....8.75-9.25
- Light fuel, PS 300....$2.05-2.10
- Heavy fuel, PS 400....$1.70-1.85

**Natural Gasoline, Grade 26-70**
- FOB Group 3....5.5
- FOB Breckenridge, Tex....5

**Penna. Lubes**
- Bright stock, 25 p.t....18.5-20
- 200 vis. neutral, 25 p.t....18.5-20

**Mid-Continent Lubes, Tulsa basis**
- Bright stock, solvent, 95 v.i....21-22
- Neutral, solvent, 200-210 vis....16.75-17.75

**Gulf Coast Lubes**
- Bright stock, solvent, 95 v.i....21-23
- Neutral, solvent, 200 vis....17.5-19.5

### Eastern Hemisphere

**Singapore, cargoes**
- Avgas, Grade 100/130....18.375
- Gasoline, 79 oct research....10.25
- Gasoline, 70-72 oct motor method....10
- Kerosine....9.375
- Gas oil, 48 d.i. minimum....9.125
- Fuel oil, light....$3.10

## KEY PRICES—CRUDE OIL

(2¢ differential per deg. of grav. applies except as noted)

### Western Hemisphere

**United States (at the well)**
- Mid-Continent, 36.0-36.9 grav....$2.82
- North Dakota, 36.0-36.9 grav....2.82
- Texas:
  - Gulf Coast, low cold test, 26.0-26.9 grav....2.95
  - Gulf Coast, upper & lower, 26.0-26.9 grav....2.82
  - West Texas sweet, 36.0-36.9....2.82
  - West Texas-New Mexico intermediate, 36.0-36.9....2.75
- West Texas-New Mexico sour, 32.0-32.9....2.61
  - East Texas, flat price....2.90
  - Mirando, 28.0-28.9 grav....2.96
- Illinois Basin, flat price....2.90
- Penna. Grade, Bradford dist., flat price....3.60
- California, Signal Hill, 21.0-21.9 grav....2.30†
- North Louisiana-Arkansas, 36.0-36.9 grav....2.82
- Wyoming sweet, 36.0-36.9....2.82
- Wyoming sour, 32.0-32.9....2.48

**Canada (flat prices, at the well)**
- Acheson-Stony Plain (Alta.) D-2, D-3, L.C....2.54
- Leduc-Woodbend (Alta.) D-2, D-3....2.60
- Redwater (Alta.) D-3....2.49
- Daily-Mississippian (Man.)....2.34
- Smiley-Viking (Sask.)....2.24

**Venezuela (Cargoes, FOB lifting port designated)**
- Cumarebo, 48.0-48.9, Tucupido....3.40
- San Joaquin, 41.0-41.9, Puerto la Cruz....3.04
- Oficina, 35.0-35.9, Puerto la Cruz....2.88
- Tia Juana Medium, 26.5-26.9, Amuay....2.30*
- Bachaquero, 16.5-16.9, Amuay, Las Piedras....1.90**
- West Tarra, 37.0-37.9, Cardon....2.99
- Lagunillas Heavy, flat prices: Cardon....1.90
  Amuay, Las Piedras....2.05

*Differential per ½ deg. grav.: (*) 2.5¢ bbl. (**) 3.5¢ bbl.*
*†Differential per deg. of grav. varies.*

### Eastern Hemisphere

**Middle East, Persian Gulf (Cargoes, FOB lifting port)**
- Arabian, 36.0-36.9, Ras Tanura....1.97
- Basrah, 36.0-36.9, Fao....1.92
- Iranian, 34.0-34.9, Bandar Mashur....1.91
- Iranian, 34.0-34.9, Abadan....1.86
- Iraq, 36.0-36.9, Fao....1.92
- Kuwait, 31.0-31.9, Mina-al-Ahmadi....1.72
- Qatar, 39.0-39.9, Umm Said....2.06

**Middle East, E. Mediterranean**
- Arabian, 36.0-36.9, Sidon....2.39
- Iraq, 36.0-36.9, Tripoli, Banias....2.39

**Far East (Cargoes, FOB Lutong, Sarawak)**
- Seria Light, 37-38 grav....2.60

## KEY TANKER RATES

(Last paid, per long ton, single voyage)

- **U. S. Gulf-New York, clean....(USMC —10%) $2.57**
- U. S. Gulf-New York, dirty...(USMC —17½%) $2.35
- **NWI-USNH, dirty....(USMC —32½%) $1.82**
- NWI-UK/Continent, dirty....(MOT —5%) 30/10*
- Persian Gulf-UK/Cont., dirty....(Scale —5%) 51/8*
- Persian Gulf-USNH, dirty....(USMC —42½%) $7.30

**Sterling*

# The Market Trend

## Eastern Venezuela: A Reappraisal

**Mene Grande Oil Co. last week announced initial postings for 12 Venezuelan crude oils.** The new listing confirms a recent trend: Eastern Venezuelan crudes are being re-evaluated to conform with market demand.

**There's a new look in Mene Grande's prices.** They split up what has been known for years as Oficina district crude (about 300,000 b/d) into three separate streams. Mene Grande listed 36-gravity Oficina at $2.84 a bbl., and also two lower-gravity oils, 30-gravity Mesa and 24-gravity Leona, at $2.57 and $2.27, respectively. Mesa and Leona crudes are new faces in world markets.

**The troubles with Eastern Venezuelan crudes have been two-fold:** Oficina district crudes aren't what they used to be; and they haven't been selling well. Although Oficina has been a byword in international markets for many years, the so-called "true" Oficina (35-gravity) nowadays accounts for no more than 60,000 b/d, or about 20% of the district's production. The flow increasingly has been overshadowed by the flow of more prolific low-gravity oils from the same general producing area.

**As the gravities of the Oficina mixture tended to decline, the oil's price position in world markets weakened.** There was a time when the mixed stream from the Oficina district had a minimum specification of 33-gravity. This later slipped to 32. Lately it has been difficult to maintain the mixed stream at 30.1 degrees. And when the mixture fell below 30-gravity, it was priced too high (by about 25¢) compared to 25-gravity Tia Juana Medium, at $2.30 a bbl.

**Segregating the fuel-products-type crude streams from Eastern Venezuela will make these oils more attractive in world markets.** This will apply especially to Canadian and South American refiners, who are the principal buyers of Eastern Venezuelan crudes. Cargo traders say the segregation of these oils is the equivalent to a price cut.

**Creole Petroleum started the trend to separate marketing of Eastern Venezuelan crudes last month.** Creole's Guanipa crude is comparable to Mene Grande's Mesa crude; Tigre oil for Creole is the same oil as Leona for Mene Grande.

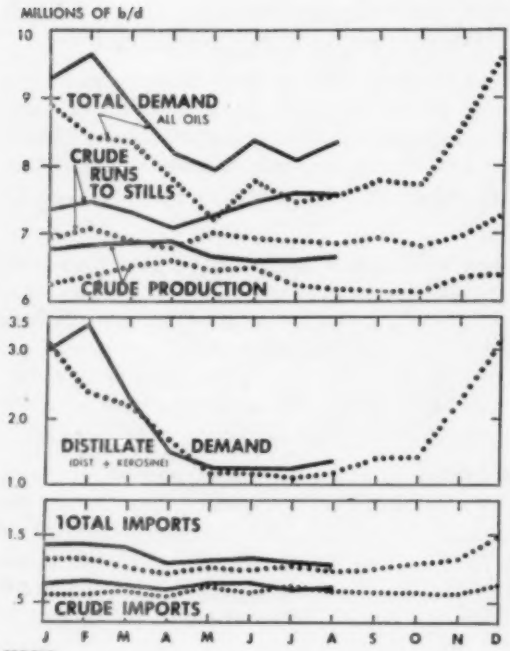
**Illinois Crude—10c Hike:** Carter Oil Co. advanced its purchase price 10¢ to $3.00 a bbl. for crude oil produced in Loudon and Mattoon pools in Illinois, effective Oct. 1. The market for these crudes has improved over the past several months, and Carter has more requests for the oil than it has oil to sell. Carter buys 20,000 b/d from these two pools.

**Resid:** General easing in the Philadelphia heavy fuel market has prompted several price cuts. Sun Oil Co. started the move, cutting No. 6 by 10¢ a bbl. to $2.58 in tank cars, $2.55 barges. Atlantic and Gulf met the reductions, but several suppliers still are waiting-and-seeing.

**Gasoline:** Gulf Coast cargo traders say that gasoline is seeing its firmest fall season in years. There's no prompt product to be had. No discounts, either. And inquiries are in the market for product for lifting as far ahead as mid-November.

PETROLEUM WEEK'S

# Fingertip Figures




**TOTAL DEMAND**

| | |
|---|---|
| Latest 4-week average | 8.336 |
| Year ago | 7.668 |

**RUNS TO STILLS**

| | |
|---|---|
| Latest week | 7.462 |
| Previous week | 7.404 |
| Year ago | 6.979 |

**CRUDE PRODUCTION**

| | |
|---|---|
| Latest week | 6.661 |
| Previous week | 6.671 |
| Year ago | 6.145 |

**DISTILLATE DEMAND**

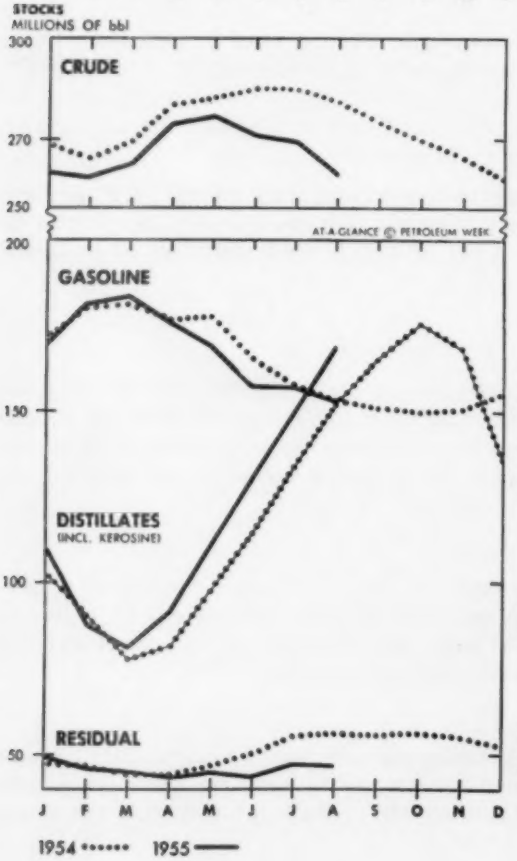
| | |
|---|---|
| Latest 4-week average | 1.461 |
| Year ago | 1.352 |

**TOTAL IMPORTS**

| | |
|---|---|
| Latest week | 1.280 |
| Previous week | 1.215 |
| Year ago | .854 |

**CRUDE IMPORTS**

| | |
|---|---|
| Latest week | .946 |
| Previous week | .892 |
| Year ago | .611 |




**CRUDE STOCKS**

| | |
|---|---|
| Week ended 9-24 | 254.6 |
| Previous week | 255.5 |
| Year ago | 270.1 |

**GASOLINE**

| | |
|---|---|
| Latest week | 151.3 |
| Previous week | 151.8 |
| Year ago | 152.1 |

**DISTILLATES**

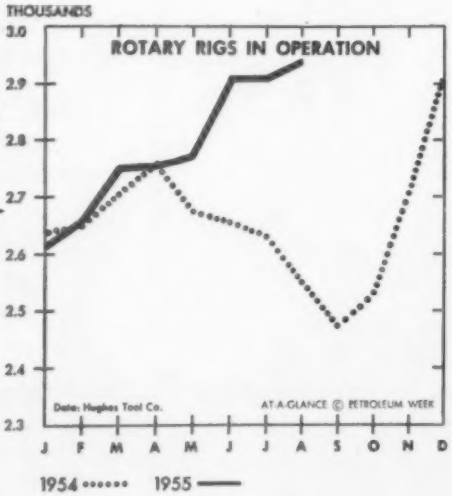
| | |
|---|---|
| Latest week | 180.0 |
| Previous week | 179.1 |
| Year ago | 166.2 |

**ROTARY RIGS**

| | |
|---|---|
| Latest week | 2.935 |
| Previous week | 2.953 |
| Year ago | 2.531 |

**RESIDUAL**

| | |
|---|---|
| Latest week | 46.8 |
| Previous week | 46.9 |
| Year ago | 56.4 |




INDICATED TOTAL DEMAND for all oils during the first nine months of this year was higher than expected, but so were refinery runs and total new supply. Strong demand for gasoline and residual fuel resulted in lower stocks of these products on Sept. 30, as compared with a year ago. The gasoline inventory position, however, is still considered high by many oil company economists. Stocks of distillates (including kerosine) at the end of September were nearly 14-million bbl. above a year previous. This is the major reason for the continuation of "summer discounts" on No. 2 fuel, kerosine, and diesel fuel on the East Coast.

Total demand in the first nine months averaged 8,528,000 b/d, a gain of 7.4% over last year. Gasoline demand, averaging 3,721,000 b/d, was up 6.8%. The big increase was in demand for products other than the four major products—gasoline, kerosine, distillate, and residual. Demand for these "other products" in the first nine months averaged 1,471,000 b/d, an increase of 15%.

Total new supply for the first nine months averaged 8,680,000 b/d, up 7.5%. Domestic crude output, at 6,737,000 b/d, was up 5.8%; natural gas liquids, at 737,000 b/d, up 10.2%; and imports of crude and products, at 1,206,000 b/d, up 16.1%. Refinery runs averaged 7,427,000 b/d, up 7% from last year.

ROBERT B. ANDERSON, successful in oil and government, has a new job. He'll be . . .

# Combing the World For Profits

**As an oil man and government official, Texan Robert B. Anderson has built up a reputation as a quiet, but efficient and energetic, administrator.**

Anderson, 45, ended his work as Deputy Secretary of Defense last month. He left the Pentagon with a national reputation as one of President Eisenhower's most widely regarded businessmen-in-government and a dominant figure in the Administration.

Anderson came to the Pentagon with a broad political background. He had been a Texas state legislator (at 22), Assistant Attorney General of Texas, and state Tax & Unemployment Commissioner. He was considered by many to be the brains behind the Texas "Citizens for Eisenhower" organization during the 1952 presidential campaign. His appointment as Navy Secretary followed.

As Navy Secretary, the Texas oil man made his mark in a hurry by wresting control of the department away from the admirals. As a businessman, Anderson was appalled by some of the Navy's administrative operations. He quickly put the Navy's industrial facilities on a corporate-like basis. He then initiated a full-scale inventory of Navy equipment, resulting in the disposal of about $1.2-billion worth of surplus goods and simplification of the Naval supply catalogue. He was elevated to the Defense post in May, 1954.

Before coming to Washington, Anderson served as general manager of the Waggoner oil and cattle properties. The $300-million Waggoner estate included about 500,000 acres of land spread over six northwest Texas counties. He joined the estate in 1937, as general counsel, and was appointed general manager in 1941. He resigned when named Navy Secretary in January, 1953.

**As an oil man, Anderson came into prominence as president of the Texas Mid-Continent Oil & Gas Assn. for four years.** In this role he was a frequent witness before congressional committees studying oil matters, presenting the independent producers' views on tidelands, depletion allowances, and the old Kerr gas bill.

Neither of Anderson's two Pentagon jobs really involved oil matters. But as the top government official with an oil background, he was frequently called on by the Administration for expert advice on industry problems. For example, he worked with Herbert Hoover, Jr., in settling the Iranian oil crisis. He was also active on the President's Cabinet Committee on Fuels Policy, sitting in for Defense Secretary Charles E. Wilson. Most recently, he helped work out a compromise on the Neely oil-import-restriction amendment to the reciprocal trade bill.

Anderson made a tremendous impression on the President. Eisenhower's personal "Dear Bob" letter, released to the press with the formal announcement of his resignation, was one of the most laudatory letters written by the President so far to an outgoing official. Anderson reportedly was one of five men named by the President as the type of young man the GOP should build up as potential presidential or vice-presidential candidates.

**Anderson's productive record and ability has won him wide recognition. As a result, he was named president last month of Ventures, Ltd., the giant Canadian holding company with worldwide oil and mining interests.**

Anderson's new post was announced by Thayer Lindsley, who founded Ventures in 1928. Lindsley, now 72, has won renown as an expert geologist. But he has devoted most of his time to finding, and accumulating, vast new stores of mineral wealth, little to actual development of these properties.

The job at Ventures will offer Anderson a real challenge. The company, appropriately named, has so many operating and development subsidiaries, some with subsidiaries of their own, it's difficult to come up with any cohesive pattern. Besides oil and gas (which form a comparatively minor portion of the whole), the many scores of Ventures operations cover the hunting for and the producing of silver, gold, iron, nickel, copper, zinc, lead, tin, cobalt, uranium, and other rare metals.

Typically, Anderson already is at work familiarizing himself with the many facets of the holding company. He will probably set up headquarters in New York City, though company headquarters is in Toronto.

**Anderson's appointment signals a major change in Ventures policy. From now on, the emphasis is expected to be on development of the various properties, rather than on further acquisition and exploration.**

One of Anderson's business friends says his being named to the post "looks like Ventures in the next few years should have a lot more of its ore under development." Lindsley isn't retiring completely, however. He is expected to be named chairman of the board at a shareholders' meeting to be called soon.

**Though Ventures is best known as a metal mining company, it has several oil properties—in the Williston Basin, in Louisiana and Texas, and in Peru.**

Ventures owns 97% of Geoil, Ltd., which has a 50% interest in Trans-Border Oils, Ltd., parent body of Wil-

# ADVERTISERS IN THIS ISSUE

*This index is published as a convenience to the readers. Every care is taken to make it accurate, but* PETROLEUM WEEK *assumes no responsibility for errors or omissions.*


Aero Design & Engineering Co. ..... 7
Cities Service Co. ..... 3rd Cover
Dowell Inc. ..... 4
Hagn Co., Joseph ..... 33
National Aluminate Corp. ..... 2nd Cover
Oxford University Press, Inc. ..... 31
Republic National Bank of Dallas ..... 3
Roebling's Sons Corp., John A. ..... 2
Scientific Design Co., Inc. ..... 4th Cover
Shell Oil Co. ..... 1
Standard Oil Co. (Indiana) ..... 17
Universal Oil Products Co. ..... 20-21
Watson-Stillman Fittings Div. ..... 8
H. K. Porter Co., Inc.


**CLASSIFIED ADVERTISING**
**F. J. Eberle, Ass't Mgr.**


EQUIPMENT
(Used or Surplus New)
For Sale ..... 39


## PETROLEUM WEEK REPRESENTATIVES

**Atlanta 3**
Stokes T. Henry
801 Rhodes-Haverty Bldg.
Walnut 5778

**Boston 16**
Edward A. Callahan, Jr.
350 Park Square Bldg.
Hubbard 2-7160

**Chicago 11**
G. L. Hackley, Jr.
W. F. Holbrook
520 North Michigan Avenue
Mohawk 4-5800

**Cleveland 15**
J. E. MacArthur
1510 Hanna Bldg.
Superior 1-7000

**Houston 25**
David G. Sawyer
724 Prudential Bldg.
Jackson 6-1281

**Los Angeles 17**
Knox Bourne
1111 Wilshire Blvd.
Madison 6-4323

**New York 36**
Edward A. Callahan, Jr.
Donald R. Thompson
330 West 42 Street
Longacre 4-3000

**Philadelphia 3**
W. A. Potter
Architects Building
Rittenhouse 6-0670

**San Francisco 4**
T. Evans Wyckoff
68 Post Street
Douglas 2-4600

**Tulsa 19**
J. A. Hartley
Room 309, 611 South Boston
Gibson 7-7767

liston Oil & Gas Co., 100% interest in Seoil, Peru, and 34% interest in Lake St. Clair Gas Fields, Ltd. Ventures also owns 39% of International Ranwick, Ltd., which is primarily a uranium mining company but gets most of its income from oil properties in Caddo Parish, La. International Ranwick also has properties in Texas' Luling field and a 50% interest in 2,500 acres in Grimes County, Tex., where it will drill a deep well, offsetting a Gulf Oil Co. well.

Trans-Border has a 20% interest in 72,353 acres in the Cremona block in the southern Alberta foothills. This Williston Basin property is being rapidly developed. Seoil now is drilling in Peru. It also has properties in Caddo Parish, which produce about 160 b/d.

**Though Anderson's background indicates he may put stress on development of the oil properties, his sharp intellect, and his broad government experience rules against unequal emphasis.**

Anderson leaned backward in his Pentagon posts to avoid undue association with oil matters. As Navy Secretary, he had control over the Navy's four reserve oil wells. But there was no significant action on these during his tenure.

He also was able to adjust himself well to government procedures, as distinct from private business—often a hard job for businessmen in government. But though many of the government's methods and goals differed from what he was used to, Anderson was able to put into effect those administrative practices from business which best fitted into the bureaucratic pattern. The result was improvement without conflict.

This faculty of steering a progressive middle course undoubtedly will come to the fore in his new job.

•

**L. LEE WELCH,** of Vincent & Welch, independent oil producers, Lake Charles, La., has been reelected president of the Louisiana-Arkansas division, Mid-Continent Oil & Gas Assn. Term of office is one year.

**DEAN A. MC GEE,** president of Kerr Mc Gee Oil Industries, Inc., has received the 1955 distinguished service award of the Southern Assn. of Science and Industry. He was cited for leadership in a variety of activities, including development of offshore oil fields.

**J. E. MIMS** will manage the new Rocky Mountain division of Shell Pipe Line Corp. Headquarters will be at Casper, Wyo. Mims has been superintendent of the firm's Rancho division, Austin, since 1952. The new division will operate facilities of Butte Pipe Line Co., now under construction from Poplar, Mont., to Fort Laramie and Guernsey, Wyo. (PW—Sep. 30,55,p28). It will also supervise Shell's wholly owned facilities in northeastern Colorado.

**ROBERT O. GARRETT** has been named vice-president and general manager of Texas Gas Exploration Corp., Houston. The firm is a production subsidiary of Texas Gas Transmission Corp., Owensboro, Ky.

**C. K. CURRY** and **GEORGE H. TRURAN** have been picked by Southern San Joaquin Valley operators to serve as district oil and gas commissioners in that area for California's Division of Oil & Gas. The seven-man commission serves as an appeals board in disputes between operators and the division. Curry is superintendent of Richfield Oil Corp.'s northern division. Truran is superintendent of Tide Water Associated Oil Co.'s San Joaquin Valley division.

**HUGO R. KAMB,** new senior geologist for Delhi-Taylor Oil Corp., Dallas, is a former division geologist for Crown Central Petroleum Co., Houston. Delhi-Taylor has also hired **Harold R. Attaway,** Dallas area procedure analyst, to head its new systems and procedures section, and **Harold Hobbs,** an oil company financial analyst, to head D-T's new stockholder-public relations section.

**A. F. WYNN** has left Amurex Oil Development Co. to become general manager of Sunshine Exploration, Ltd., Calgary, a wholly owned subsidiary of Sunshine Mining Co. of Kellogg, Idaho.

**GEORGE T. BRIGGS** has been named assistant general manager of The Texas Co.'s production department. He succeeds **A. R. Wilson,** who retired this week after 39 years with the company, mostly in the management branch of production operations. Briggs, who started as a clerk with Texaco in 1927, has been manager of the Louisiana division since January, 1954. His assistant there, **Harry X. Bay,** will move up to division manager.

**B. I. GRAVES,** a former vice-president of Tide Water Associated Oil Co. and more recently a private petroleum consultant, will move his offices from New York City to San Francisco next week. Before founding B. I. Graves Associates, he was in charge of Tide Water's eastern operations. He has been a director of the American Petroleum Institute and of the National Petroleum Council for many years. His new office address will be 315 Montgomery St., San Francisco.

**W. P. HANCOCK** will manage exploration activities for Canadian Export Gas, Ltd. He was exploration manager for Merrill Petroleums, Ltd.

**E. K. LEWIS** takes over this week as head of the Edmonton refinery of Imperial Oil Ltd. He succeeds **H. H. Moor,** who has been given charge of the company's Imperoyal refinery, at Halifax. Lewis has been superintendent of the Ioco refinery, near Vancouver.

**DAVID B. BARLOW** has been named secretary and treasurer of both Salt Lake Refining Co. and Salt Lake Pipe Line Co., subsidiaries of Standard Oil Co. of California. He succeeds **Robert W. Johnson,** recently appointed assistant controller for the parent company at San Francisco. **Austin B. Chinn,** who joined California Standard as a laborer at the company's Richmond refinery, has been named superintendent of operations. He replaces **Lee P. Morris,** recently appointed acting superintendent of the new Vancouver refinery of Standard Oil Co. of British Columbia, another California affiliate.

**J. H. (JAKE) FLESHER,** district superintendent for Bell Oil & Gas Co., at Pampa, Tex., is stepping out voluntarily this week after 26 years with the company. He is 75 years old. He has played a rather unique role in the Texas Panhandle oil industry, having served as umpire frequently in disputes between companies and groups over production history in the area. His memory has been called upon for details of particular well depths, formation thickness, plug-backs, and production problems—information not contained in records kept 20 or 30 years ago.

**CAPT. ROBERT J. BALL,** port captain for Sun Oil Co. at Marcus Hook, Pa., has retired after a half-century at sea. He joined Sun as third mate on a tanker in 1916 and received his first full command less than four years later. He became port captain in 1948.

**DR. MORRIS M. LEIGHTON,** chief emeritus of the Illinois State Geological Survey of Urbana, will be general chairman of the 41st annual meeting of the American Assn. of Petroleum Geologists. The affair, a joint meeting with The Society of Economic Paleontologists & Mineralogists, will be held Apr. 23-26 at the Conrad Hilton Hotel, Chicago. The theme will be: "Sealing factors in oil and gas reserves."

**ARTHUR M. HAYES,** head of the legal division of Standard Oil Co. (N.J.), has been appointed deputy head of the company's tax department. Before joining Jersey last year, he had served 13 years with Esso Standard Oil Co. **Homer M. Eagles,** a member of Jersey's tax department since it was formed in 1924, has been promoted to administrative assistant. **Thomas S. Hinkel,** executive assistant to **G. S. Koch,** tax department head, will replace Hayes as head of the legal division.

**RAY JENKINS** has been given charge of rotary drilling operations, in the Kimball area, of Lewis Drilling Co., Denver. **Stan Eatmon** will handle cable tool operations.

**E. DALE MOUNT,** vice-president and general manager of Harry Bass Drilling Co., Dallas., has been elected president of the American Assn. of Oilwell Drilling Contractors. He succeeds **Chet Whaley,** president of Chet Whaley Well Servicing Co., Houston. Mount, 49, joined the Bass organization in 1931, after three years as a high school teacher. He has been a director of AAODC for many years. The association also elected **W. L. McClusky,** of M. J. Dulaney Co., Dallas, as secretary-treasurer.

**C. A. CASH** has been elected vice-president and assistant to the president of Shamrock Oil & Gas Corp., Amarillo. He started his career with Shamrock in 1935, and since 1948 he has been assistant to the vice-president in charge of operations.

**G. DAVIDSON** has been appointed vice-president, manufacturing, of Shell Oil Co. of Canada, Ltd. He succeeds **Dr. D. M. Morrison,** recently elected president of Trans Mountain Oil Pipe Line Co. Davidson joined Shell in 1925. Since 1951 he has been manager of the company's refinery at Montreal East.

**H. R. (ROSS) BOLTON,** new vice-president of Crescent Corp., will have charge of exploration and production. He succeeds **C. A. Houy,** who has joined Lee Evans Drilling Co., Tulsa, as president. Both men joined Crescent's predecessor, Deep Rock, in 1950; Bolton became their chief engineer and Houy their production superintendent.


# CLASSIFIED

**DISPLAYED RATE**

The advertising rate is $12.60 per inch for Equipment and Business Opportunity advertising appearing on other than a contract basis. Contract rates quoted on request.

Employment opportunities—$14.80 per inch, subject to Agency Commission.

**UNDISPLAYED RATE**

$1.50 a line. Minimum 3 lines. To figure advance payment count 5 average words as a line. (See ¶ on Box Numbers.)

POSITION WANTED. Undisplayed rate is one half of above rate, payable in advance.

PROPOSALS, $1.50 cents a line an insertion.

**INFORMATION**

BOX NUMBERS count one additional line in undisplayed ads.

NEW ADVERTISEMENTS accepted 16 days prior to issue date.

# Time To 'Bleed a Little'?

As an oil company president said the other day: "Things have been done that just aren't right. Legal, yes—but not good for the industry. We are going to make our contribution toward correcting the situation, even if we have to bleed a little around the edges."

He was talking about commercial accounts and the charges that majors are using cut prices to take business from jobbers. But as he and other oilmen know, the matter goes a lot deeper than that. It extends to imports, and to natural gas, and to gasoline price wars. The attacks against the industry from the legislative halls, from government agencies, and from within the industry itself, are getting harder and harder to repel.

Maybe the company president is right. It could be that some of the oil industry's competitive practices aren't really sound for the long run. Aggressive competition is obviously essential to the industry, and it must remain. But even the companies admit that sometimes their field men are "overzealous" in going after added volume. And soon the gasoline price war flags are flying. Station dealers are complaining they can't live on the narrowed margin. Bills are written by lawmakers. And newspapers have headlines.

Soon jobbers are protesting the loss of commercial account business that it took them years to build. They threaten to withdraw support from Oil Industry Information Committee. And they talk of lobbying for cuts in the depletion allowance. It's the same story with imports, and all down the line.

Maybe a lot of companies will have to "bleed a little." Maybe a lot of companies will have to weigh the advantages of some policies that may build new volume against the damage that may result from those policies—in the form of industry disunity and public ill will.

The answer won't come easy, because of the shifting interplay of supply and demand, competitor policies, and human emotions. But the oil leaders who come up with the right answers will do the industry a service that has been long overdue.

# GOING PLACES *in the roaring jets with Cities Service...*

The gargantuan, ever-growing thirst of the military jet planes was slaked last year by 124,000,000 gallons of Cities Service jet fuels. Cities Service refineries are geared to provide increasing quantities of vital defense matériel.

CITIES SERVICE

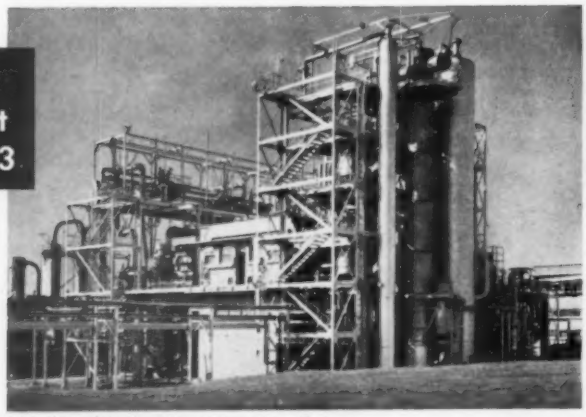
*A Growth Company*

*Number 13 of a series*

# NEW DEVELOPMENTS

## 3rd Ethylene Oxide Plant To Use SD's Direct Oxidation Process

First Plant 1953



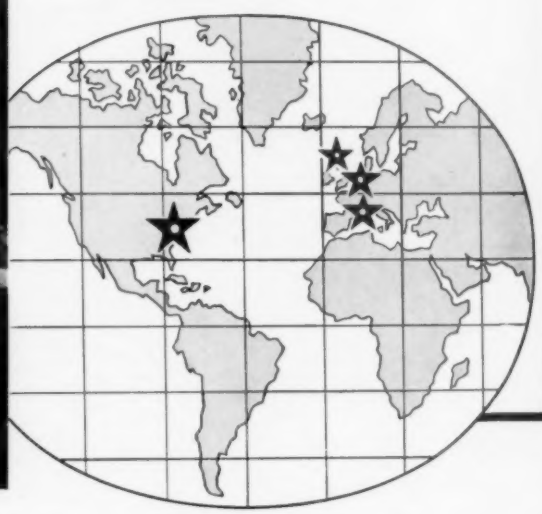
Naphtachimie Plant Lavera, France

Third Plant 1956

Societé Chimique des Derives du Petrole Antwerp, Belgium

"We knew from our laboratory work in America that ethylene oxide could be produced at a lower cost by our direct oxidation process. Our pilot plant work in England proved it," says Dr. Robert Egbert, SD's Vice President of Engineering.

Dr. Philip Newman, SD's European Representative, says, "Our transatlantic experience in adapting standards of various countries to SD's process resulted in greater flexibility of design, as well as continued improvement of the process."



# SD's "International Exchange" Pays Off

So far the payoffs have been in Lavera, France, and the United States. Next year SD crosses the Atlantic again for Societé Chimique des Derives du Petrole's new ethylene oxide and ethylene glycol plants in Antwerp, Belgium.

The less expensive direct oxidation process used in these ethylene oxide plants was developed in SD's American headquarters laboratories and put in pilot plant operation in England.

Naturally, there were many problems in "translating" data—both from pilot plant to commercial production and from foreign engineering practices to American standards. SD's international experience in ethylene oxide also provided the background necessary to solve these problems of "translation" in chloromethanes, citric acid and maleic anhydride processes.

Today, American companies can take advantage of the continued "international improvement" of SD's lower cost process of direct oxidation of ethylene.

On this or any other organic chemical plant design problem, SD's services are available to you on a confidential basis. In new plant construction or the revamping of existing facilities to increase production efficiencies, you will profit by utilizing SD's specialized experience in organic chemicals plant design.

SCIENTIFIC DESIGN COMPANY, INC.
*Executive Offices:*
Two Park Avenue
New York 16, N. Y.
*Engineering Offices:*
*Jersey City, New Jersey*